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Telling Secondhand Stories:
News Aggregation and the Production of Journalistic Knowledge

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Telling Secondhand Stories:
News Aggregation and the Production of Journalistic Knowledge

by

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Dedication

For Dana, whose patience, sacrifice, and grace
made this project possible and inspire me daily.

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Telling Secondhand Stories:

News Aggregation and the Production of Journalistic Knowledge

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News aggregation has become one of the most widely practiced forms of newswork, as more news is characterized by information taken from other published sources and displayed in a single abbreviated space. This form of newsgathering has deep roots in journalism history, but creates significant tension with modern journalism's primary newsgathering practice, reporting. Aggregation's reliance on secondhand information challenges journalism's valorization of firsthand evidence-gathering through the reporter's use of observation, interviews, and documents.

This dissertation examines the epistemological practices and professional values of news aggregation, exploring how aggregators gather and verify evidence and present it as factual to audiences. It looks at aggregation in relationship to the dominant values and practices of modern professional journalism, particularly those of reporting. The study employs participant observation at three news aggregation operations as well as in-depth interviews with aggregators to understand the practices of news aggregation as well as the epistemological and professional values behind them.

I found that aggregation proceeds by gathering textual evidence of the forms of evidence gathered through reporting work, positioning it as a form of second-order

newswork built atop the epistemological practices and values of modern journalistic reporting. Aggregators' distance from the evidence on which they base their reports lends them a profound sense of uncertainty, which they attempt to mitigate by using textual means to communicate their epistemological ambivalence to their audiences and by seeking out technologically afforded means to get closer to news evidence. Aggregators' uncertainty extends to their professional identity, where they attempt to improve their marginal professional status by articulating their own ethical values but also by emphasizing their connections to traditional reporting. Narratively speaking, however, their work does not break down traditional journalistic forms, but instead broadens the narrative horizon to conceive of individual news accounts primarily as part of larger story arcs.

The study illuminates the fraught relationship between aggregation and reporting, finding that while aggregation is heavily dependent on reporting, it can be developed as a valid, professionally valued form of newswork. Ultimately, both forms of work have a crucial role to play in providing vital, engaging news to the public.

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INTRODUCTION

Chapter 1: Aggregation and the Changing Epistemology of Journalism

Elizabeth Flock aggregated and wrote three posts before noon on her last day of work at *The Washington Post*'s breaking news blog, blogPost, on April 13, 2012. The third post was based on an article in a science news site called Discovery News on new research that suggested that NASA's Viking robots may in fact have found life on Mars in 1976. Flock hastily read at least 10 articles on life on Mars, including some of the research papers in question, she later told the *Post*'s ombudsman, but forgot to link and credit the Discovery News article where she had first seen the news. Not only did she not link or credit the story, but she included in her post two slightly rewritten paragraphs from the Discovery News article (Pexton, 2012). Discovery News objected, and Flock promptly resigned — not under pressure from her editors, she told a reporter, though she had been publicly critiqued four months earlier for aggregating a viral story that turned out to be untrue. When emailed by a Poynter reporter after her resignation, she told him she had "always sought a pure reporting position over one that involves aggregation" (Beaujon, 2012, para. 1).

When the *Post*'s ombudsman, Patrick Pexton, wrote about Flock's resignation the next week, he did not excoriate Flock for her misdeeds, but instead concluded that "The *Post* failed her as much as she failed The *Post*" (Pexton, 2012, para. 10). Based on conversations with other young writers doing aggregation for the *Post*, Pexton described an environment in which aggregators — journalists rewriting stories based on news initially published elsewhere — worked with little guidance or editing and intense pressure to produce lots of content that generated significant web traffic. The work he described might have been more closely associated with widely reviled "content mills" such as Demand Media[1] that paid freelance writers meager rates to write inane content

[1] See glossary for definitions of Demand Media and all other digital media companies and news organizations listed in this study.

based on search traffic, but it was the norm among young bloggers at one of the U.S.' largest and most prestigious newspapers.

The response among media observers was one not of surprise, but of knowing disappointment. Flock was working on what the *Columbia Journalism Review* had dubbed "the hamster wheel" of relentless newswork (Starkman, 2010). But one writer noted that while the work was certainly relentless, it was hardly mindless. Pushing back against the description of Flock's work as "flipping news burgers," journalist Trevor Butterworth noted the astonishing number of sources and subjects Flock had juggled in her seven-post, 2,700-word output the day before. Though Flock's work required a near-constant exercise of news judgment and precise writing skills, it wasn't simply the same work her colleagues had always been doing. In fact, Butterworth argued, the reason her mistake was seen as so egregious was because it drew attention to "the inherent cheapness of the product and the ethical dubiety of the entire process" of "ripping off someone else's material for cheap pageviews" (Butterworth, 2012, para. 6).

Flock's aggregative work was both an intensely focused exercise of evaluating, gathering, and concisely communicating the day's news and an unoriginal, parasitic, and frowned-upon practice. It was a distillation of everything journalists loathe about the pretenders to their profession, as well as much of the core of the craft of journalism itself. This tension was on particular display in Flock's case, but it has become more acute throughout journalism as aggregation has ascended as a practice throughout the news industry. In news aggregation, more journalists are practicing a form of work that draws heavily from the traditional core of newswork but also intrinsically relies on the published work of others to gather and shape information. The result is a form of work that is profoundly uncertain, both professionally and epistemologically, and strikes at the core of what kind of work journalists do and how they perceive it as a profession.

The conflict in Flock's case — between the professional opprobrium for the secondary nature of her work juxtaposed with the similarity of her work to much of what

other professional journalists do — is the tension at the center of aggregation work as a form of contemporary journalism. Aggregators (along with bloggers, their epistemological and occupational forbears) have been met by traditional journalists with responses ranging from condescension to contempt, yet their work is much more closely tangled with the work of reporting and editing than those responses would indicate (Anderson, 2013a). More generally, the professional and practical tension around aggregation is an apt lens through which to view the fraught nature of contemporary journalistic practices in a digital environment that has eroded their initial modernist justification, which was based on the verifiability of objective reality through informal reporting methods. As journalism continues to adapt to an informational environment in which the raw materials for their accounts are more easily obtained by those outside their profession, and the ways in which they report those materials are more easily challenged, journalists are being forced to resolve the incongruity between their new practices and the realist and professionalized values to which their profession still adheres. News aggregation has been one of the front lines in journalism's struggle over the proper way to reconcile a jumble of quickly emerging practices with a more stubborn set of abiding values.

Over the past 15 years, aggregation has moved from an easily marginalized set of practices and functions performed by a small cluster of bloggers along with search engines and portals to one of the most widely practiced forms of newswork in the digital age alongside reporting (Anderson, 2013a, p. 56). As Boyer (2013) argues, today's newsmaking is "as much about managing multiple fast-moving flows of information already in circulation as it is about locating and sharing 'new' news" (p. 2). This is a shift that has been enabled, if not embraced, by traditional news organizations. Executives and newsworkers at those organizations spent the past decade decrying the parasitic nature of aggregators and the need to protect "original reporting" as the core of journalism, all while eliminating reporting positions and adding aggregation as a part of virtually every

news website and an essential duty for many journalistic positions. The shift away from reporting — particularly the investigative, enterprising form most valorized by professional journalists — has been thoroughly documented through the decline of staff and time and the rise of desk work and press release-initiated, recycled "churnalism" (Bakker, 2014; Boyer, 2013; Lewis, Williams, & Franklin, 2008; Paulussen, 2012; Project for Excellence in Journalism, 2010).

Many journalists and academics have decried the decline of reporting as damaging to democracy because it weakens journalists' ability to monitor government institutions, expose corruption, and represent the public's interests as a check on political power (e.g., Downie & Schudson, 2009; Jones, 2009; McChesney & Nichols, 2010). There is truth to these concerns, but the ascendance of the hyper-personalized, information-thin news environment fostered in part by aggregation presents still another democratic challenge, as it serves to "depoliticize and personalize journalism thereby stripping it from its political role" (Siapera, 2012, p. 167). Aggregation is often characterized as a response to an abundance of information, a way to reduce that information to a digestible size (e.g., Popova, 2012; Sonderman, 2011). But in its efforts to do that, it can strip out all but the most elementary pieces of that information, leaving the user with an account that is more simplistic than simple and does little to advance public knowledge of important issues. And while aggregation can expose audiences to a broader range of sources than they would otherwise access, it can also carry an emphasis on personalization and affirmation of existing beliefs[2] that can give users a relatively narrow range of individually engineered information and perspectives. The decline of reporting and accompanying rise of aggregation, then, do not seem to bode well for journalism's classic democratic function of monitoring power or be conducive to the type

[2] Personalization in aggregation comes largely through mobile aggregation apps, which allow users to customize the subjects or stories on which they receive information. The use of aggregation to affirm existing beliefs is more typically the province of social news sites such as Upworthy and Mic, which gather and frame information to be shared widely among particular demographic and political cohorts with whose views they are likely to be consonant.

of information environment that lends itself to a strong public response to journalism on important issues in the public's interest.

But while eyewitness-based, "shoe-leather" reporting is demonstrably declining, newsgathering itself has hardly disappeared. The type of enterprise reporting work built around direct observation and interviews as well as painstaking investigative efforts — the type of work professional journalists have often had in mind when they refer to reporting — has surely declined. But its ebb been accompanied by a parallel rise in hybrid, unsettled forms of newswork that involve gathering information from a pastiche of other sources — some published, some unpublished; some official, some spurious — and piecing it together into an abbreviated, digestible format.

This work shares quite a bit in common with more traditional forms of reporting, which have always revolved around gathering information from a network of sources and passing it on in a streamlined format. But it also exhibits some potentially important differences that are, at bottom, epistemological in nature. The validity of the information presented by each of these methods depends heavily on their answers to particular questions about the epistemology underlying their procedures: Which of those sources hold the most validity and weight as evidence? How are those evidentiary attributes determined? How does that evidence function together to form facts in news accounts? And how much and what kind of narrative is necessary to make meaning of those facts? "Shoe-leather" reporting methods and news aggregation may seem to be differentiated by their divergent answers to these questions, but they also share many of the same epistemological roots in the ability of humans to ascertain the reality of a situation and the role of news to express that reality authoritatively to the public. After all, despite the frenzied and secondary nature of their work, Flock and her colleagues were said to be required to adhere to the same standards for originality, verification, and accuracy as the rest of the *Post* (Pexton, 2012), and those standards are rooted in a deeply modernist

epistemology of newswork that views reality as something that can be reliably discerned and communicated through the evidence-gathering and textual conventions of reporting.

STUDY PURPOSE

On a basic level, this study is an effort to characterize news aggregation — to determine what aggregators do, what they value, how they think about their work, and how they relate to the larger field of professional journalism. In part because of its marginal professional status, aggregation has received relatively little scholarly analysis compared to its prevalence in actual journalistic practice. This study is an attempt to help remedy that shortcoming, providing a focused and comprehensive examination of aggregation as an increasingly coherent set of practices that make up a growing share of today's news production.

But beyond that basic descriptive purpose, this study seeks to explain the tensions in these changing forms of newswork from an epistemological and professional perspective. In doing so, it examines the answers that news aggregation gives to the questions listed above regarding the validity of various forms of evidence, the function of that evidence to form facts, and the use of narrative to give meaning to those facts, among others. Through this analysis, it places them in the context of reporting, newswork, and news narrative historically, as well as the professional norms and constraints of contemporary journalism in the digital age. It thus offers a window into the changing nature of journalistic work and epistemology: As reporting's share of newswork declines and journalism moves beyond a realist, reporting-centered work structure, news aggregation is emerging as a core practice embodying the profession's shift toward more hybrid and epistemologically uncertain forms of producing and presenting the news.

The purpose of this study is fourfold: 1) to characterize the nature of aggregation as a distinct and emerging practice within contemporary news production; 2) to examine news aggregation's relationship to traditional reporting's epistemological practices and assumptions regarding the construction of evidence and facts; 3) to understand the role of

narrative in aggregators' understanding and communication of the news; and 4) to explicate the relationship between news aggregation and professional journalism as it pertains to identity and values. To those ends, this study employs a combination of participant observation and in-depth interviews of a variety of aggregators — that is, newsworkers who gather, reorganize, and publish news based on information initially published elsewhere — to understand the nature of their work not only at the procedural and technical levels, but at the professional and cultural levels as well. I undertake fieldwork observing aggregators at three organizations — a mobile breaking-news app named Circa with an innovative narrative structure, a social news site with the pseudonym SportsPop that puts a peppy and frothy spin on sports aggregation, and an aggregator with the pseudonym VidNews that produces news videos largely from secondary material. I supplement that participant observation with interviews with 44 aggregators from those three organizations and a variety of others, covering a broad range of issues with aggregators from all corners of the journalism profession. In doing so, I aim to examine the values, norms, and practices of aggregation as a form of newswork specifically, as well as the implications that the contours of this emerging form may have for ongoing shifts within journalistic work more broadly.

EPISTEMOLOGY, PROFESSIONALISM, AND JOURNALISM

This study is set at the convergence of several strains of journalism scholarship — namely, the study of the epistemology of journalism, practically manifested in the work of reporting and textually represented in the form of news narrative, as well as the quickly growing body of research on the evolving relationship between online news production and professional norms and practices. Epistemology is a particularly relevant theoretical foundation for a study of aggregation because it addresses many of the questions that distinguish aggregation from other forms of news production — the sources of evidence for its accounts of news, the way that evidence is assembled and weighed to construct those accounts, and the basis for certainty in presenting those

accounts to the public. I briefly sketch out both areas here to more clearly situate this study within them and lay the foundation for the theoretical and conceptual analysis of the rest of the project.

Epistemology, the study of the nature of knowledge and the criteria by which truth and reality are apprehended, has been an important issue of inquiry into journalism since the origins of the journalism studies subfield. In the 1920s, Walter Lippmann asserted that "news and truth are not the same thing, and must be clearly distinguished" (1922/1961, p. 358), explored the conditions under which they diverge, and laid out the scientifically derived methods (such as gathering documentation and other supplementary evidence and evaluating it alongside each other to reach conclusions) by which they might be made to most closely resemble each other. Not long afterward, the Chicago School's Robert Park (1940) delineated news as a particular form of knowledge distinct from history, science, anecdote, and gossip, and in the following decades communication scholars tended to take up the questions of what effects that knowledge had on the public rather than how it was created. That changed with the newsroom ethnographies of the 1970s, which began to closely consider the process by which news was constructed as knowledge and established the foundation for modern research into the epistemology of journalism. Those scholars examined the means by which journalists turn various pieces of the chaotic stream of occurrences and situations in the world they perceive into news events, then transform those events into facts and then into news itself (Fishman, 1980; Gans, 1979; Molotch & Lester, 1974; Schlesinger, 1978; Tuchman, 1978). Their work put the lie to the notion, common among scholars until then and among journalists to this day, that news can and should be simply a mirror of reality, capable of reflecting events and social conditions essentially as they are by pursuing accounts of those realities objectively (Shoemaker & Reese, 2014; Tuchman, 1978).

In the decades that followed, several scholars went further in their challenge of the realist epistemology on which modern professional journalism was founded,

contending that not only was news not a mirror of reality, but that there was no definitive reality for anyone to discern in the first place, as what we perceive as reality is the product of contingent social relationships and vantage points (e.g., Ericson, 1998; Ericson, Baranek, & Chan, 1987; Ettema & Glasser, 1998; Hackett, 1984). This perspective had long been expressed within the social constructionist approach to epistemology (e.g., Berger & Luckmann, 1966), but it has been at times an awkward fit with journalism, which focuses so resolutely on the concreteness and intransigence of knowable events. As Schudson (2011) notes, journalists' process of constructing a picture of reality through the news is shaped not only by cultural beliefs and ideological principles, but also by the stubborn intrusion of unanticipated events, many of which cannot on an elemental level be fabricated. My discussion of journalistic epistemology is thus deeply influenced by the constructionist model — specifically, the premise that news is and can only ever be a production of reality rather than a reflection of it. I acknowledge the persistence of occurrences and states of being that exist on some level apart from journalists' ability to construct them publicly, but contend that journalism is incapable of definitively perceiving or communicating those states and instead presents a construction a reality.

The scholarship on the epistemological underpinnings of journalism, particularly as it is practiced within digital spaces, has been relatively sparse within the past decade and a half, particularly when juxtaposed with the growth of journalism studies as a subfield during that time. There have been notable exceptions, however: Several studies have adroitly analyzed the attributes of the knowledge that news produces (Ekström, 2002) as well as the influence of epistemological paradigms such as realism, constructionism, pragmatism, and hyperrealism on professional journalists' values and practices (Godler & Reich, 2013a, 2013b; Hearns-Branaman, 2011), the emergence in online journalism of digital objects of evidence such as the hyperlink (Anderson, 2013c), and the character of journalistic expertise (Reich, 2012).

One particular area of active epistemological scholarship on which this paper will draw is the work on the role of narrative in constructing and presenting journalistic knowledge. During the 1980s and 1990s, numerous scholars expounded on the ways in which narrative forms and conceptions shape journalists' understanding of facts and also help build shared cultural spaces in which audiences can construct meaning from those facts. The facts journalists present, those scholars argued, cannot be conceived of by journalists or understood by audiences without the frameworks that narrative provides (e.g., Bennett & Edelman, 1985; Bird & Dardenne, 1988; Ettema & Glasser, 1998; Jacobs, 1996; Lule, 2001; Mander, 1987; Roeh, 1989). The concept of narrative forms in news, especially as they relate to its epistemology, has been widely applied since then. But it has rarely been developed further, outside of the limited but substantial work done on the changes in narrative forms as news is communicated in online environments built on hypertext and interaction with audiences (e.g., Robinson, 2009; Wall, 2005). This study extends the analysis of the role of narrative in journalism into the contemporary digital and mobile news environment by examining the production of shorter and more granular narrative forms of news through aggregation. In particular, this study addresses the intersection between journalistic knowledge and narrative form by exploring the ascendant idea that news should be primarily organized not within an article-based narrative form, but around smaller, more granular "atomic units," that can isolate facts or events from their narrative contexts (e.g., Glick, 2011; Jarvis, 2011, 2012; Kovach & Rosenstiel, 2010). This idea has manifested itself in the development of projects like the mobile news app Circa, which built its content out of short "points" consisting of discrete facts and which served as one of the field sites for this study.

The final major strain of research from which this study draws is the scholarship on online news production, particularly as it relates to the professional norms, practices, and identity of journalists. The conceptual theme of professionalism is a particularly important one within the context of this study because aggregators occupy a contested

and liminal status in relation to the broader journalistic profession, building many of their professional norms and practices on those of traditional journalism but lacking the status of journalists who primarily practice reporting. Scholars have sharply disagreed over whether journalism constitutes a profession (Shoemaker & Reese, 2014; Singer, 2003), but as Schudson and Anderson (2009) and Lewis (2012) have noted, the more important question than whether journalism conforms to the characteristics of a profession is under what conditions journalists seek to attain and claim professional status for themselves. In journalism's case, professionalism tends to be built on the attempt to monopolize the production of knowledge about current events (Schudson & Anderson, 2009). Journalistic professionalism arose in the United States in the late 19th century as the newspaper took its place as the primary instrument of mass communication of information within an increasingly urbanized and industrialized society (Schudson, 1978). To the extent that a professional culture holds sway within contemporary journalism, that culture remains rooted in the mass culture of the late 19th and early 20th centuries, in part because of the close connection between mass media and the monopolization of knowledge production, as well as the enduring influence of objectivity, which emerged in tandem with professionalism and is the philosophical lifeblood that flows into and out of it (Ryfe, 2012; Schudson & Anderson, 2009). This professional culture has faced a significant challenge in recent years from the participatory and networked structure of information in online contexts, which, as Lewis (2012) argues, has obviated "the 'problems' of publishing," making it so that "information is no longer scarce, hard to produce, nor difficult to repurpose or share" (p. 838). In doing so, these participatory processes undermine journalism's professional justification for control over the production and filtering of news.

Online journalists have been at the center of these tensions, and the professional uncertainty and rapid transformation of their work have made them a fruitful subject for study in recent years. Much of the emerging field of journalism studies has been built

around the shift of news production to digital contexts and the attendant ruptures in professional routines, values, and identity. A number of ethnographic projects have documented this emergence of online journalism as a practice drawing heavily from professional journalism but developing variants from some of its key norms and practices (Anderson, 2013a; Boczkowski, 2004, 2010; Boyer, 2013; Robinson, 2011; Ryfe, 2012; Usher, 2014). These studies have given us an increasingly detailed picture of the type of work supplanting traditional forms of professional newswork, which is dominated by precarious and flexible labor conditions, an often overwhelming sense of urgency and immediacy, and a constant attunement to relentless flows of information mediated through various screens (Anderson, 2013a; Boyer, 2013; Deuze, 2007; Usher, 2014).

Online journalists often experience the struggle between professional control and more openly oriented innovation as a continual tension between continuity and change — not just in their day-to-day practices, but also in the deeper values that guide their work and the way they perceive themselves as professionals (Agarwal & Barthel, 2015; Hartley, 2013). As a result, online journalists maintain an ambivalent attitude toward journalistic norms and practices, selectively adapting some — for example, pulling away from professional mainstays such as objectivity in favor of transparency — but still holding a deep respect for the rigor of many traditional journalistic methods and standards even as they flout others (Agarwal & Barthel, 2015; Hartley, 2013; Vobič & Milojević, 2014). This ambivalence toward traditional journalism is also entangled with their marginal professional status. Online journalists' skills are both marveled at by their colleagues for their technical sophistication and treated as secondary to the core work of journalism, causing them to lack much of cultural and symbolic capital that traditional forms of journalism have accrued (Hartley, 2013; Siapera & Spyridou, 2012; Usher, 2014). This applies in particular to aggregators, who are continually told by the larger profession that "'proper' journalism is deep, investigative, informative (as a public

service), time-consuming and polished" (Hartley, 2013, p. 584) — while their own work tends to be quick, unpolished, and derivative.

PROBLEM STATEMENT

This study brings those strains together by getting at the deeper question of the changing epistemological underpinnings of online journalism through the emerging norms, practices, and professional identity of news aggregators. The epistemology of journalism is rooted in abstract, unspoken principles that can be difficult to bring to light, but it is always enacted in grounded routines and practices and articulated norms. In the case of news aggregation, I am especially interested in its epistemological underpinnings as they regard two particular aspects that tend to most sharply diverge from traditional journalistic practices: The use of evidence almost exclusively from published sources, as opposed to the traditional journalistic objects of observation and interviews; and the isolation of individual facts and news accounts from the narrative formats — traditionally the inverted pyramid and its variants — whose putatively neutral, fact-based nature have traditionally helped established their factuality to audiences. Put another way, this study seeks to answer the questions: How does news aggregation conceive of and validate factual information apart from the forms of evidence that journalists, through reporting, have long used as their primary basis for constructing news accounts? And how do aggregators understand and present isolated, granular news accounts that are divorced from the narrative forms that have traditionally helped audiences view them as factual and meaningful? These questions can help elucidate the nature of aggregation as an emergent practice of journalism, especially in comparison to other forms of newswork and reporting in particular. But beyond that, they can begin to give us a picture of the quality and provenance of the information making up the contemporary news environment and the changes in the ways journalists are determining how they know what news is in quickly shifting digital information contexts.

To sum up the fourfold argument of this study, then: First and most generally, I characterize aggregation as an emerging form of newswork, one with deep ties to professional journalism's milieu but an increasingly distinct and coherent set of standards, values, and practices. Second, I argue that aggregators practice a form of second-order newswork with epistemological practices and principles built on those of traditional reporting but also with an intrinsic dependence on published sources based on the work of reporting, leaving it defined by its additional degree of distance from the evidence on which it relies. Third, I argue that aggregators' breakdown of traditional news narrative into shorter and more granular forms does not obviate the role of narrative in news, but instead broadens it by shifting the primary realm of narrative construction in news to the meso level of the overarching arc of an ongoing news story, rather than the micro level of an individual article. And fourth, I contend that aggregators' professional identity is marked by both a sense of inferiority and even shame regarding their own work in comparison with the work of reporting as well as an emerging desire to set and police professional and ethical standards for aggregation in order to establish their professional legitimacy. Through these four arguments together, I aim to provide a rich and nuanced picture of news aggregation as an emerging journalistic practice that supplements and challenges traditional journalistic norms and practices but also grapples with profound uncertainties about its own epistemological and professional validity.

At its core, news aggregation is the product of a convergence of numerous contradictory and paradoxical factors, and this study is an attempt to explain what those factors are and how they shape this form of work. These contradictions and tensions color every significant aspect of aggregators' work. Aggregators are trying to isolate and validate facts just as other journalists have, but they do not have the direct access to the evidence those journalists have used to construct those facts through reporting. Aggregators are re-emphasizing an old form of derivative newswork relying on other published sources that dominated mid-19th-century journalism, but they are doing it

while embodying contemporary journalism's increasing struggle with discerning the certainty of claims amid the increasing volume and speed of the online information environment. Aggregators are stripping out narrative devices from their accounts in order to isolate facts, but because they are building their work on other journalists' stories, they are tied into even broader ways of conceiving of their work and reality as narrative. And aggregators are dogged with a sense of professional inferiority regarding their own work because of its secondary relationship to reporting, but also see the striking resemblances of their own work to reporting and assert themselves as professionally legitimate and responsible. These are the tensions and contradictions that make aggregation a form of second-order newswork, one indelibly marked by both the values and norms at the core of modern professional journalism as well as the exigencies and pressures of the online environment that shape contemporary newsmaking. And these tensions also make aggregation an apt embodiment of the current state of journalism, in which uncertainty, precarity, and contingency exert nearly as strong an influence on news production as the historic so-called "bedrock" principles of modern journalism.

I illustrate these characteristics and contradictions through a study that employs both participant observation and in-depth interviews of a variety of news aggregators. The participant observation involves three weeks of fieldwork, one each at three different news aggregation operations encompassing a range of professional contexts, from SportsPop's affiliation with a legacy news organization to Circa as a news startup, and a range of narrative formats from a mobile app (Circa) to video (VidNews) to a social news site (SportsPop). The interviews both broaden and deepen the data gathered through observation, covering a broad range of contexts and forms of aggregation and offering more direct inquiry into the cognitive processes behind the practices involved with news aggregation. The approach thus combines the depth of three observation- and interview-based case studies with the breadth of more than 40 interviews detailing norms and practices across a diverse area of practice.

The study proceeds as follows:

- I begin in *Chapter 2* by defining aggregation and outlining the array of forms and practices that have been incorporated into it, as well as the professional context in which it is practiced and its tense relationship with traditional professional journalism.
- In chapters 3 and 4, I lay the theoretical foundation for the study; *Chapter 3* outlines journalism's epistemological roots, examining journalism as a set of knowledge-producing practices built on particular epistemological principles and exploring the challenges of aggregation to those practices and values.
- *Chapter 4* takes up narrative as a particular vehicle for validating information and communicating meaning in news, tracing the bifurcation of traditional news narrative into longform and shortform journalism and the growth of the "atomic unit" of news as an orienting idea.
- In *Chapter 5*, I justify and outline the methods used in this study and reflect on my own role in the project.
- Chapters 6 through 8 lay out the results of the study. In *Chapter 6*, I examine the practices through which aggregators construct evidence and verify accounts as factual, finding an uncertain blend of secondhand reliance on traditional journalism's validated methods of reporting along with ad hoc means of evaluated information that cannot be directly validated.
- In *Chapter 7*, I examine aggregators' use of narrative to understand and present stories at the macro, meso, and micro levels, particularly exploring their heightened understanding of story arc and their conception of abbreviated story forms as narrative.
- In *Chapter 8*, I explore the fraught relationship between aggregators and professional journalism, focusing closely on their perceptions of their own and others' legitimacy and status within the profession.

- Finally, in *Chapter 9*, I outline the key findings of the study and explore their implications for the development of digital journalism more generally.

In examining the epistemological practices of aggregators and their relationship to the larger profession of journalism, I hope to add to the field's understanding of how aggregation relates to historical and contemporary journalistic practices, and how it is contributing to the epistemological and professional development of journalism as a whole.

BACKGROUND

Chapter 2: Defining and Contextualizing News Aggregation

This study has as its object the practice of news aggregation, which I define, outline, and set in the context of professional journalism more broadly in this chapter. News aggregation makes an apt object of study for several reasons: It is rapidly ascendant as a central form of contemporary journalism, taking a place alongside reporting and editing as a dominant mode of newswork (Anderson, 2013a, 2013c; Boyer, 2013; Martin, 2014). Yet it has arrived at its location within the profession through a rather roundabout means; it is rarely taught in journalism schools, and many of its practices were absorbed as much from the culture of online content production built around blogging and social media as from professional socialization within the newsroom (Agarwal & Barthel, 2015; Coddington, 2014b; Rosenberg, 2009). Aggregation's entry into the journalistic profession through the side door gives it a distinctly liminal position, one that can help illuminate a range of influences on contemporary journalistic practice outside of these traditional journalistic means of socialization. As such, this chapter explores one of the key points of tension outlined in the introduction to this study: Aggregation has deep ties to professional journalism, both in its historical roots and in current practice, yet it has repeatedly been marked as professionally illegitimate and irresponsible and placed in opposition to reporting, a practice with which it is inextricably connected.

Aggregation has emerged as a contentious practice within journalism, generating repeated rounds of pointed discourse among journalists and online writers, indicating that it sits at the confluence of several crucial values and practices that journalists hold closely and view as under attack. Despite this professional and cultural significance, aggregation has drawn relatively scant attention from scholars of digital journalism; with a few notable exceptions (Anderson, 2013a, 2013c; Boyer, 2013; Vobič & Milojević, 2014), scholars have done little substantial inquiry into the work and values of aggregation, as much of the scholarship has examined the phenomenon from an economic angle (e.g.,

Dellarocas, Katona, & Rand, 2013; George & Hogendorn, 2012; Lee & Chyi, 2015). In this chapter, I will examine aggregation in three ways: First, I will define it by providing a typology to classify its many forms and by distinguishing it from adjacent forms and terms, particularly curation. Second, I will explore the fraught but deeply entangled relationship between aggregation and professional journalism, outlining their conflicts over economic, legal, and ethical issues and tracing the boundary between aggregation and reporting. Finally, I will briefly describe the context of online journalistic work in which news aggregation takes place, outlining the professional identity and practices of online journalists more broadly. My intent through the analysis of this chapter is to define aggregation and explain its relationship to the two forms of work with which it is most closely connected: Professional journalism, most broadly, and online news production more specifically.

DEFINING AGGREGATION

Aggregation encompasses a broad set of practices, and the entities that engage in those practices produce a widely disparate range of informational products and services. As such, the definitions of aggregation used in academic studies of the phenomenon are quite general, though not universally agreed upon. Most definitions focus on aggregation as a type of content as opposed to a practice, defining "aggregators," rather than aggregation itself. The most common element of these definitions is the characterization of an aggregator as a source that "takes information from multiple sources and displays it in a single place" (Isbell, 2010, p. 2), a definition broad enough that it could conceivably include editing. This is the central component of several definitions, some of which explicitly contrast such information with originally produced content (Chowdhury & Landoni, 2006; Lee & Chyi, 2015; Madnick & Siegel, 2002; Stanyer, 2009). Two aspects of aggregation might be added to clarify and specify this definition: First, that the information aggregation collects has already been published; and second, that aggregated information is presented in an abbreviated form from that already-published information,

whether through summaries, quoted excerpts, or at the most basic level, headlines. These clarifications eliminate several adjacent forms of content production: republishing content in full, which does not involve abbreviation, and pre-publication editing and news writing, which do not involve collecting already published information. The definition of aggregation under which this study will operate, then, building on Isbell's (2010), is: *taking information from multiple published sources and displaying it in an abbreviated form within a single place*. I use the word "source," both in this definition and elsewhere in this dissertation, to refer not strictly to people informing journalists of news, as scholars of journalism typically have (e.g., Carlson, 2009; Cook, 1998; Tuchman, 1978), but more generally to any piece of information on which a news account might be based. In the case of aggregation, these sources are typically published accounts and the news organizations that produce them.

Scholars and professional observers have noted that several broader forms of information work also fit within a basic definition of aggregation: Libraries, museums, radio stations, film and television distributors, and search engines have all been defined as aggregators, and could fit under definitions such as Isbell's (2010) (Paterson, 2007; Thompson, 2013; Vonderau, 2014). Indeed, all of journalism itself could be considered a form of aggregation more broadly, with its central focus on gathering information from varied sources and collecting it into one streamlined account. These broadened forms of aggregation certainly speak to the important role that aggregation has played in helping societies sort through and organize information since long before the advent of the Internet, but any phenomenon that includes all of these disparate practices is simply too diffuse for focused academic study. I am thus examining aggregation more narrowly as an essentially online practice that involves both published and abbreviated content — a relative of library, museum, and media distribution work, but not something that includes those forms under its umbrella. Unlike many analog forms of aggregation, online aggregation's sources and product are bound within a single medium — the Internet —

but can draw from the immense amount of disparate information sources and formats that have converged into that medium, making it at once distinctly constrained and open with possibilities. This definition does not delineate the practice based on subject matter and thus is not limited to news aggregation — it would still include search engines, for example — but in this dissertation, I will apply it largely to aggregation of news-related information and thus typically refer to it as news aggregation.

Looking more specifically at aggregation as it relates to news, only a few scholars have attempted to define aggregation as a set of practices that form a particular type of work. Anderson (2013a, p. 56; 2013c, p. 1015) defines aggregation work as building links between news stories to form bundles, and ranking those bundled stories based on importance, popularity, and newsworthiness, a form of "second-order newswork" that puts stories together into a whole rather than turning facts into stories. Kovach and Rosenstiel (2010) offer a similar but less formal definition, calling aggregation "harnessing and organizing existing information" and "making choices about relevance, value, and significance" (p. 52-53). In these definitions, aggregation is an effort to add value to that existing content by putting it in context and imposing organization and order on it to enable audiences to process ever-growing floods of information.

Both these work-based definitions and broader content-based definitions tie aggregation to several adjacent practices. Traditional journalistic work, which will be explored later in this chapter, is one readily evident area of overlap with aggregation. Aggregation has also shared much in common with several forms of blogging, particularly the link-and-comment format around which many early blogs were built, using links to bring together a wide range of information from around the web, with brief comments fleshing out those links (Matheson, 2004; Rosenberg, 2009). Indeed, numerous bloggers and other professional writers describing this type of work in online contexts have described it as simply a continuation of blogging, and many of the traditional media

attacks on aggregation have characterized it in similar terms to what they once used to describe bloggers (Good, 2004; Kissane, 2010b; Sullivan, 2009; Thompson, 2013).

Similarly, aggregation also bears some connection with what Graves (2015) describes as "annotative journalism," a form pioneered in muckraker I. F. Stone's investigative inquiry into published statements and news accounts and continued in fact-checking and blogging. Like annotative journalism, which "proceeds mainly through the critical analysis of published texts" (Graves, 2015, p. 100), aggregation is a fundamentally intertextual form of newswork, acting on other published texts. Annotative journalism's intertextuality, however, is far more predicated on critical analysis of those texts than aggregation tends to be. Along with blogging, aggregation also has roots in online search and retrieval, particularly the search engines and portal sites such as Yahoo and Google News that came to prominence as news aggregators in the early 2000s. As Paterson (2007) explains, by the mid-2000s, the terms "search engine," "portal," and "aggregator" had become virtually synonymous, though aggregation has developed beyond that narrow conception since then, as news organizations have developed a far richer and more complex range of aggregational forms and practices.

As I refer to aggregators in this dissertation, I will often juxtapose them with "traditional journalists," whom I define as journalists who perform the traditional (i.e., rooted in the 20th century) newswork of reporting and editing. I do this not to imply that aggregators and journalists are mutually exclusive categories — they are certainly not, and many of the aggregators in this study would accurately be described as journalists — but simply to draw a distinction between aggregators and those journalists who are doing the type of reporting and editing work that has largely characterized journalism for at least the last half-century. At times, I will limit the comparison to aggregators and reporters (rather than reporters and editors together), in which cases I will use "reporters" specifically.

A Typology for Forms of News Aggregation

Even under a deliberately narrowed definition, aggregation's significant roots in and overlap with this broad range of practices give it a complex web of forms that can be difficult to characterize and relate to each other. The automated search service of Google News, the snarky news and gossip blogging of Gawker, and the app-based twice-daily news summaries of Yahoo News Digest are all forms of news aggregation under this definition, yet they are so disparate in intent and production process that it can be difficult to make meaningful comparisons among them. As such, it is helpful to make some distinctions within aggregation to aid clear thinking and conceptual comparison between broad forms or particular cases of news aggregation.

A handful of writers have attempted to create typologies of aggregation, most of them in blog posts (Catone, 2007; Gray, 2010; McAdams, 2013), though Isbell (2010) has offered one within the scholarly literature. One of the primary dimensions in attempts to make distinctions within aggregation is in automated versus manual forms; as we will see later in this chapter, this is often also cited as the fundamental difference between aggregation and curation (Bakker, 2012, 2014; McAdams, 2013; Paterson, 2007). Isbell's (2010, p. 2-5) typology, which has been adopted in a few other studies (Grueskin, Seave, & Graves, 2011; McDonnell, 2012), takes a different approach, dividing aggregators into four basic types: 1) Feed aggregators such as Google News, which arrange material from various websites into feeds consisting largely of links, headlines, and a few lines of text; 2) Specialty aggregators, which do similar work to feed aggregators but limit their focus to a particular area of interest; 3) User-curated aggregators such as Reddit, in which users submit links and summaries; and 4) Blog aggregators such as Gawker, which use content from other sources as material on which blogger-written content is based.

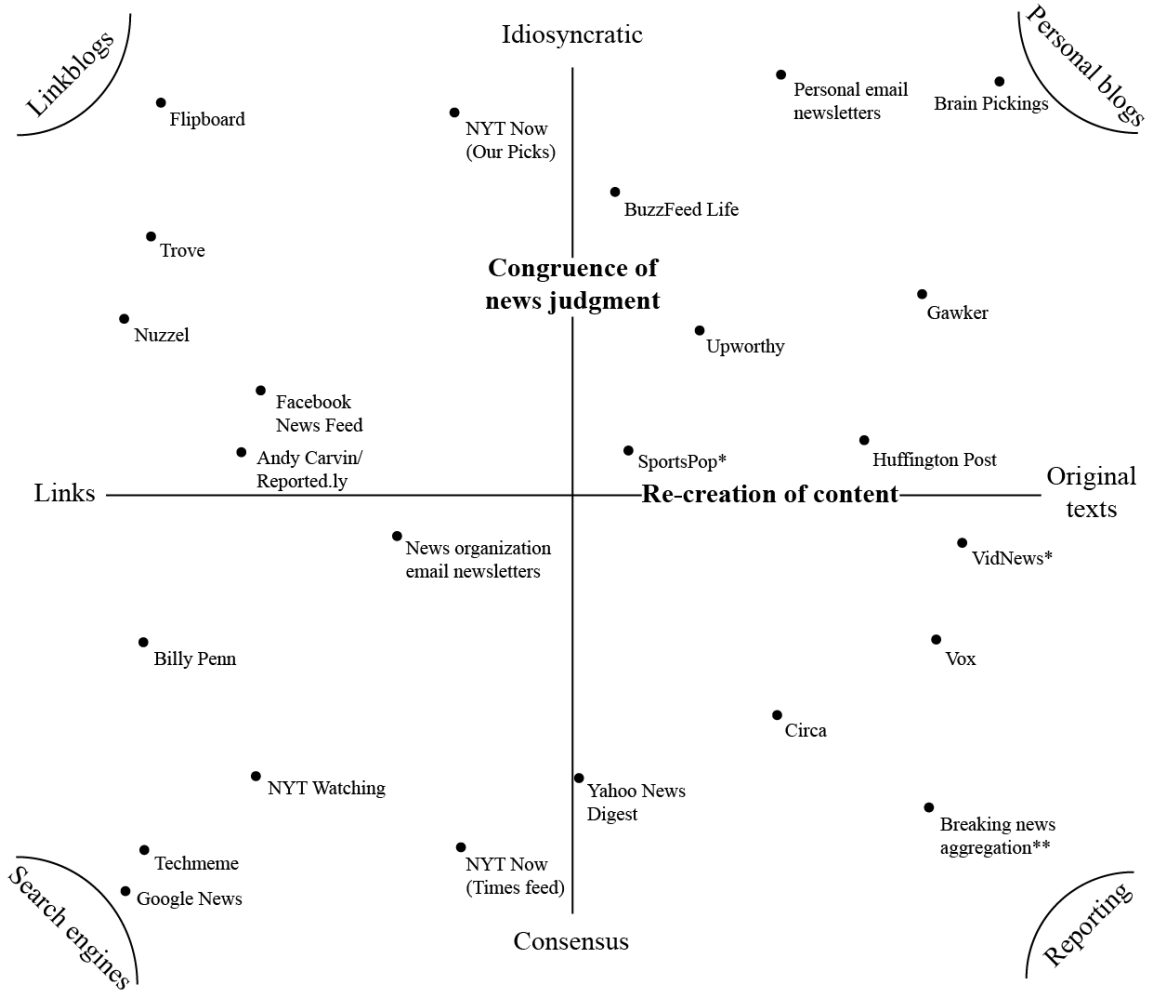
These distinctions are useful starting points, but they are insufficient in several respects. The distinction between automated and manual aggregation is a helpful baseline conceptually, particularly for a study such as this that focuses on the work practices that constitute aggregation. But its breadth limits its usefulness, especially as the forms of

manually based aggregation continue to proliferate, creating a mass of widely varying forms of aggregation within the broad category of manual aggregation. A manual/automated distinction can set apart Google News as a distinct aggregative form, but it offers little guidance in differentiating Yahoo News Digest, Gawker, the real-time social media aggregation of Reported.ly, and the social news aggregation of Upworthy. Isbell's typology suffers from two key deficiencies: First, the category of specialty aggregators is a distinction based on content rather than form, creating problems of classification — how focused does something have to be before it is a specialty? — and mutual exclusivity, as a specialty aggregator could also simultaneously be any of the other three forms. Second, the category of blog aggregators has limited relevance at this point, as blogging has become increasingly amorphous, defying generalized classification (Karpf, 2012). Among the major purveyors of aggregation in today's online environment, very few could be purely classified as blogs in the traditional sense, while blogs' fundamental form of links knit together through comment or analysis has been absorbed across a variety of aggregative forms. A reconceptualized typology could thus be useful for classifying forms of aggregation.

The typology I have developed for news aggregation (see Figure 1) involves two dimensions, one examining aggregation as a process of producing content and the other as a product of news judgment. The first, horizontal dimension measures the degree of *re-creation of content* by the aggregators — the extent to which the aggregator reassembles the information gathered from its sources into a new narrative form or a re-produced account. On one end of that dimension are collections of links or links and headlines, which involve minimal re-creation work and whose practices are oriented instead around the selection and filtering of content, rather than re-assembling it into an originally produced account. Many automated aggregators fall on this end of the dimension, though there are manual forms of aggregation, such as Tumblr reblogging, that fall under this characterization. On the other end of that dimension are aggregation forms that consist of

largely re-created accounts, in which the elements drawn from other sources are used as the raw material for an account that is distinct from that of the original source. In traditional journalism, this was the type of aggregation work involved when journalists re-reported or re-wrote stories that had first been published by a competitor. It involves similar work today, along with some more blog-oriented forms of aggregation, like Gawker, that use information published elsewhere as a jumping-off point for commentary or opinion.

Figure 1: A Typology of News Aggregation



*Pseudonym for an organization studied in this dissertation
**Commonly referred to within the news industry as "breaking news reporting"; work consists primarily of aggregating breaking news published elsewhere online and adding confirmatory reporting.
Note: All placements of aggregators are approximate, intended primarily for illustration. See Glossary for descriptions of listed organizations.

The second dimension (depicted vertically in Figure 1) examines the aggregator's *congruence of news judgment*, or the degree to which it conforms to the prevailing professional consensus judgments of newsworthy topics and central sources, based on both their public statements about their goals and the congruence of their content itself. At one pole, consensus-based aggregators aim to provide users with selections that represent a widely held judgment of the most important news and most prominent sources. Many of these aggregators tend to characterize their purpose in terms of giving users "what you need to know," while elevating newsworthiness as a central attribute, while others define the importance of their content in a more individual way, placing a priority on personalization — such as response to search in the case of Google News, or customized updating in the case of the news aggregation app Circa. Despite the automation and personalization, they still exhibit a desire to reflect consensus news judgment; Google News seeks to give users what are widely considered the top news stories on its main page and the most prominent sources among publishers and news organizations in response to specific searches by the user. Likewise, Circa sought to cover each of those consensus top news stories while citing the most prominent sources, despite its ability to allow users to personalize the stories on which they received updates.[3]

At the opposite pole, idiosyncrasy-based aggregators aim to capture the distinct tastes of a single person of group of people, working more toward an eclectic and serendipitous mix of content than a reflection of the consensus judgment of news professionals. The particular individual predilections these aggregators hope to reflect may be the creator's (such as on blogs or sites like Brain Pickings that use a creator's distinctive taste to unearth an idiosyncratic collection of thought-provoking items) or the user's (such as in algorithmically aggregated apps like Flipboard that aim to provide a wide range of personalized reading selections). Among these aggregators, the range and

[3] This desire by Circa to reflect the consensus judgment of major professional news organizations is addressed further in chapters 5 and 6.

distinctiveness of sources is paramount — as this is a significant part of the value it provides for users — and consensus-driven newsworthiness recedes in importance. The original design of *The New York Times*' NYT Now app, launched in 2014, provides a good illustration of the difference between these two poles: It was divided into two streams (since merged), one consisting solely of *Times* stories on the biggest news of the day (consensus-based aggregation), and the other, called "Our Picks," consisting of an eclectic array of thoughtful, amusing, or strange pieces of content from a wide range of other sources. The *Times* stream was consensus-based aggregation, focused on giving users a quick update from only one authoritative source on what was widely considered the most important news; Our Picks was idiosyncrasy-based aggregation, focused on providing fresh and off-the-beaten-path stories from a wide variety of sources reflecting the distinct tastes of its editors.[4]

Each of the four quadrants formed by these two dimensions exhibit ties, then, to particular adjacent practices to aggregation. The lower-right quadrant (re-created/consensus judgment) is closest to traditional reporting, and much of the work that is called reporting but is heavily reliant on published sources will land in this area. The lower-left quadrant (linked/consensus judgment) holds the closest ties to search engines; most search engines, in fact, would themselves be classified here, and many of what Isbell (2010) classified as "Feed aggregators" fall in this quadrant as well. The top two quadrants maintain the closest ties to traditional forms of blogging: The top left (linked/idiosyncratic judgment) is tied most closely to the linkblogs of blogging's early days in the 1990s (Rosenberg, 2009), while the top right (re-created/idiosyncratic judgment) is more closely tied to the forms of blogging that have used links primarily as foundation for individual expression, that fit blogging pioneer Dave Winer's (2007)

[4] In an interview for this study, Stacy Cowley, an editor of the NYT Now app, described the main *Times* feed as being meant "to give people the absolute most important things happening right then. The classic, you know, top news feed." Our Picks, she said, was meant to provide distraction and serendipity for the hypothetical user who said, "I've got five minutes. What can you show me that's going to be entertaining?""

definition of a blog as "the unedited voice of a person." Aggregators, journalists, and others have often attached normative evaluations to some elements of these dimensions, particularly to the degree of re-creation. Some have held up either minimal link-based aggregation (Bond, 2011) as superior because it is difficult to inappropriately excerpt in such little space, or have championed substantially re-created aggregation (Buttry, 2012a) because it is more conducive to adding substantial value to the original account. However, this typology is not intended to have a normative tint; aggregation can be practiced well or poorly, ethically or unethically, in any one of these quadrants. My study will include practices across all four quadrants — each quadrant is represented among the interviewees for the study — but it is somewhat weighted toward higher re-creation of content, as each of the three fieldwork sites (Circa, SportsPop, and VidNews) are further toward the "original texts" end of that dimension.

Aggregation and Curation

The phenomenon most closely connected with aggregation is curation. The two terms are often used as a pair — either treated as interchangeable, contrasted as responsible/irresponsible (with curation held up as the former), or defined in terms of the other, occasionally with curation as a subset of aggregation. Curation does carry a distinct set of meanings from aggregation, though I do not believe it is a useful term to define a distinct form of online information work. In the following brief section, I will explain how curation has been used in academic and professional settings, what role it has played in aggregators' self-conception, and why it is not a useful term for careful academic study of online information production practices.

Within both academic and professional contexts, online curation is typically defined in terms of careful selection and arrangement of high-quality content around a particular subject or theme, and the presentation of that content with interpretation and context (e.g., Bakker, 2014; Good, 2010; Guerrini, 2013; Hogan & Quan-Haase, 2010; Kanter, 2011; Martin, 2014; Odden, 2010; Schweigert, 2012). The term is used to refer to

an extremely broad range of activity in online contexts, ranging from publishing content as a marketing strategy to writing news summaries to posting photos on Pinterest, but it is often tied closely to these types of content selection and presentation processes within the realm of social media, and particularly the platforms of Twitter and Tumblr in recent years (Battista, 2012; Chocano, 2012; Guerrini, 2013; Hermida, 2012).

Curation is a term borrowed from the world of art, in which curators acquire, care for, and preserve works of art to present together in coherent collections in museums and galleries. Many advocates of the term in online contexts have laid out the comparison between online content curation and art curation, highlighting the similarity in both forms of selection of high-quality material, organization around meaningful themes, and presentation with appropriate context by which objects take on additional meaning by being presented together (Kissane, 2010a; McAdams, 2008; Popova, 2011; Scime, 2009). The online appropriation of the term has met with some resistance from people with backgrounds in art curation, who have argued that merely selecting and presenting a carefully chosen set of online items does not rise to the level of curation work (Langer, 2012; Madsen-Brooks, 2010; Morin, 2012; Sicha, 2012). The differences between the two are indeed significant; compared with its online counterpart, art curation involves care and preservation, tangible objects and physical spaces, and more behind-the-scenes conservation work than the purely public display of online curation (Alvarez, 2012; Kissane, 2010c; Walsh, 2012).

Despite this complex and contested connotation, in practice, the term curation often ends up being used simply to refer to manual aggregation, or aggregation that is done particularly thoughtfully or carefully. The term tends to be contrasted with "mere" aggregation, with aggregation denigrated as mechanical, parasitic, and unhelpful, and curation held up as purposeful, responsible, and useful (e.g., Forry, 2009; Jarvis, 2009a; McAdams, 2013; Rosenbaum, 2009).[5] In this way, the term curation performs an

[5] Though it has characterized the two a bit more carefully, academic literature has tended to distinguish between the two along these lines as well, characterizing aggregation as cheap and automated and curation

important rhetorical function, using the association with the sophistication of art curation to establish some distance from the term aggregation, which has been stripped of much of its cultural capital through repeated derogation within traditional media. Poynter's Sam Kirkland (2014) captures well this attempt to use the term curation to elevate aggregative work and draw a boundary between responsible and irresponsible forms of it: "Aggregator, for some good reasons, has apparently become a dirty word … So now it seems there's a tendency to elevate the act of summarizing other people's reporting into an art form that sounds more benign and skillful than aggregation" (para. 7). As Kirkland notes, some aggregators, like the mobile news app Circa, have vigorously objected to others' use of the term aggregation to refer to themselves and insist instead on curation, further demonstrating the importance of curation to maintaining distance from the negative connotations of aggregation.

Despite this immense gap in the rhetorical purpose of the two terms, there is little in the definition of curation that actually differs from that of aggregation. Curation has thus come to mean, essentially, "good aggregation" — or, as Mathew Ingram (2012b) puts it, "it's called curation if you like it, aggregation if you don't" (para. 3). For those who describe themselves as practicing curation, it serves as a remarkably effective shield against criticism of their type of work, as it leaves no room for bad curation to exist: If it's curation, it's by definition good, and if it's not good, then it's actually just aggregation. To the extent that researchers adopt the term curation to describe this set of practices, then, they limit their own ability to examine those practices critically.[6] I will thus avoid the term curation in this study, instead using aggregation as a base term to describe the range of activities examined here.

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as more careful and manual (Bakker, 2014; Grueskin et al., 2011; Martin, 2014). The association of automation with inferior and thoughtless content selection is likely in part a manifestation of a long-running and well-documented social fear of automation.

[6] A definition of curation as manual and aggregation as automated, as some academics have used (Bakker, 2012, 2014; Martin, 2014) is unhelpful as well, since so much aggregation work is a hybrid of manual and automated processes that can be difficult to peel apart, especially given the fundamentally human role in designing automated processes. This kind of binary use of the two terms ignores the complex interplay at work between human and technological actors in any form of aggregation.

AGGREGATION AND PROFESSIONAL JOURNALISM

Ever since it began to emerge outside traditional journalism through blogs, search engines, and portal sites in the late 1990s and early 2000s as a distinct form of information gathering, aggregation's relationship with professional journalism has been particularly fraught. Frequent and fiery debates over the value — or vices — of aggregators have roiled online for more than a decade. Even as traditional news organizations have increasingly taken up aggregation as a form of newswork, they have struggled to incorporate that work with the rest of their practices and values, as acutely evidenced by the plagiarism case of Elizabeth Flock at *The Washington Post* described in the previous chapter.

These conflicts are, at their core, a form of boundary work, a process through which a group works to expand or defend its cultural and professional authority and autonomy, enlarge its social and material resources, and define itself as distinct from adjacent groups or fields (Carlson, 2015; Gieryn, 1983; Winch, 1997). Journalists perform this boundary work both by seeking to incorporate new practices and actors, or by expelling deviant practices and actors as irresponsible, and unprofessional (Carlson, 2015). The authority that journalists' boundary work is meant to protect is the ability to act as a credible provider of news and, in turn, a trustworthy interpreter of social reality. As a competing news provider practicing a similar form of newswork, aggregators have presented a threat to this authority for traditional journalists. Those journalists have responded by attempting to publicly portray aggregators as not only distinct from them, but also as professionally deficient and illegitimate — as economically dangerous to the news industry, as ethically irresponsible, and as producers of shallow and simplistic content. This next section outlines the nature of that boundary work and aggregators' response to it, examining the tension between aggregation and professional journalism in terms of economic and legal aspects, ethical principles, and the relationship between reporting and aggregation work.

Economics and Legality of Aggregation

Online discussion of aggregation by both traditional journalists and aggregators has often been dominated by an economic frame, with aggregation's journalistic worth and ethical principles debated in terms of the traffic it sends and the revenue it earns or keeps other news organizations from earning (Coddington, 2013). Critics of aggregation within traditional journalism have argued that aggregators are fundamentally parasitic, using their inexpensively produced summaries or indexes of stories produced by others to divert attention from the original work while not incurring any of that work's substantial costs (e.g., Bunz, 2009; Mishkin, 2009; Osnos, 2009; *The New Republic*, 2011). In some cases, these detractors have placed some of the blame on aggregators for the economic collapse of the newspaper industry and have warned that if online information continues to shift toward aggregation, traditional journalism will be so economically hampered that there will be little original content for aggregators to summarize (Keller, 2011a; Schultz, 2009; *The New Republic*, 2011). This rhetoric peaked in the late 2000s and early 2010s and was often accompanied with calls for aggregators such as Google to share the revenue gained for links (Doctor, 2009; Osnos, 2009; Schultz, 2009). The idea never took off in the United States, though it has had some limited success in Europe (*Der Spiegel*, 2013; Filloux, 2013; Roberts, 2012). This argument is strengthened by the fact that many aggregators' economic model is built on maximizing traffic to their sites to sell ads against, which increases the incentive for simply drawing as many visitors as possible, rather than allowing the originator of content to reap that web traffic and encouraging users to simply go directly to that original source.

Aggregators and their defenders have responded to these charges by arguing that they show their worth by bringing traffic to the pieces they link to — more traffic than that content would have gotten by itself, and enough that news organizations actually ask to be aggregated by them (Arrington, 2010; Klein, 2015; Potts, 2009; Snyder, 2009). The blame for the traditional news industries' woes, they argue, lies at the feet of those news

organizations themselves for their failure to extract sufficient revenue from the traffic they've gained (Jarvis, 2009b; Potts, 2009; Richmond, 2009).

Research into aggregators' economic role in online news markets tend to support the aggregators' case, but with several caveats. Economists have found that aggregators' value to the overall online news ecosystem does indeed tend to depend in large part on the rate at which their readers click through to the sites to which they link; aggregators tend to increase the overall traffic within a news ecosystem, but that benefit doesn't spread to other members of that network unless a substantial number of readers click through (Calin, Dellarocas, Palme, & Sutanto, 2013; Calzada & Ordóñez, 2012; Dellarocas, Katona, & Rand, 2010). Several studies have found that aggregators are non-competitive with more traditional news sites (Huang, Yang, & Chyi, 2013; Lee & Chyi, 2015; Yang & Chyi, 2011) and other researchers have shown evidence of a substantial aid in traffic to news sites from Google News, but those readers tend to be "drive-by" traffic — often non-local visitors to local news sites, which tend to be less financially valuable for those sites (Chiou & Tucker, 2011; George & Hogendorn, 2013). Calin and colleagues (2013) found that click-through rates from aggregators — and thus their economic value to news sites — differed significantly based on the length of excerpts. Longer excerpts and images, they found, were good for aggregators but bad for their sources because they drew more readers to an aggregator over its competitors, but made them less likely to click through to the originators of the information.

This animus over economic issues has occasionally spilled over into legal challenges against aggregators. Between 2005 and 2012, several news organizations, led by The Associated Press, sued or issued copyright takedown notices against aggregators that posted either headlines and summaries of their content, like Google News, or that rewrote their content for paying subscribers (for a good summary of these cases, see Weaver, 2012). These cases have made many aggregators more careful about how they appropriate sources, especially wire services, whose content can only be reproduced by

their subscribers. (In one of the organizations of this study, VidNews, this abundance of caution can be a significant obstacle in verifying news originally reported by wire services, as I will illustrate in Chapter 6.) Most of those cases have been settled out of court, so there has been relatively little firm legal guidance in the U.S. arising from the recent case history surrounding aggregation and copyright, whether using wire service or otherwise. But the legal arguments for and against various forms of aggregation turn on a few key points: First, titles, short phrases, and facts have not been found to be copyrightable as substantially original forms of expression, though articles as a whole have been (Isbell, 2010; Weaver, 2012). Second, aggregators' defenses have centered on fair use, whose four standards tend to slightly favor them, depending on the nature of the aggregation. Aggregated work is more likely to stand up legally if it is transformative, aggregates heavily factual information, uses only a relatively small portion of the copyrighted work, and does not substantially damage the market for the original work (Isbell, 2010; McDonnell, 2012; Weaver, 2012). The latter point has been the most contested in the courts and, as we have seen, in public discourse.

Finally, several news organizations have turned to the hot news misappropriation doctrine, a principle based on a 1918 ruling[7] that protects facts if the facts were obtained through sufficient work, are time-sensitive, and are aggregated by a free-rider in direct competition with the aggregated (Bayard, 2010; McDonnell, 2012). The doctrine has been seen as the most effective legal tool for combating aggregators, but even it has been by enervated by recent rulings (Lattman, 2011; McDonnell, 2012). Ultimately, while legal recourses remain for the wholesale copying and republishing of news content, the legal efforts by traditional news organizations in the U.S. to circumscribe aggregation have largely fizzled out.

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[7] The case, *International News Service v. Associated Press*, involved a news service that was paraphrasing AP dispatches from World War I. The U.S. Supreme Court ruled that the AP did not have a copyright claim, but nonetheless prohibited International News Service from redistributing the AP's reports because the two services were in direct competition, in the process articulating the principles that became known as the hot news misappropriation doctrine (Bayard, 2010).

Ethics

These economic and legal concerns have colored the discussion of aggregation ethics. Since one of the primary factors in an aggregator's economic value and legal acceptability is the degree to which it sends traffic to its sources, sending traffic has also become one of the foremost markers of ethical uprightness. Sending traffic is not so much a bedrock ethical principle in itself, but an assurance of an aggregator's rectitude — and not sending traffic, a sure sign of transgression — since many of aggregation's ethical standards are meant to give appropriate credit and attention to the originator of content (Coddington, 2013; Waxman, 2010). Bloggers and aggregators have loudly resisted any efforts to impose formal standards on their work (Martin, 2014; Nolan, 2012), but a consensus of ethical principles around aggregation has begun to coalesce, drawing on both professional journalistic values and the practice-based norms that have emerged within the blogosphere. Those principles are built around three basic practices: Linking and attributing, taking minimal excerpts, and "adding value."

Linking and attribution are at the core of aggregation's ethical precepts — its "nearly non-negotiable principles," as former newspaper editor Steve Buttry (2012b) puts it. Linking to sources and attributing information to those sources has risen to a universally professed online value, even if it not always followed in practice. Even as accusations of insufficient linking or attribution fly, the arguments are never over whether one should link and attribute information, but over just how thorough and how prominent the links and attribution should be. It is common, then, for people on opposite sides of a flap over sufficient attribution and linking to appeal to the same principle, often expressed as a sort of Golden Rule of aggregation: Link to others as you would have them link to you (Carr, 2012; Jarvis, 2008a; Silver, 2015). This principle maps well onto both the professional journalistic principle of attributing sources, as well as the blogging etiquette of socially reciprocating links (Coddington, 2014c). Still, accusations continue to spring up of aggregators such as The Huffington Post or BuzzFeed systematically obscuring or downplaying their source material while ostensibly adhering to the

standards of including links and attribution in each post (Manjoo, 2012; Tate, 2011). The standards have thus homed in on the type of links and attribution given: Links that are in the text of a story (as opposed to on the bottom or side) are preferred, as well as links to the original source of a report, and specific attribution to a news organization rather than simply "reports" (Arment, 2012; Buttry, 2012b; Dumenco, 2011; Jarvis, 2008a). When aggregators are publicly castigated for lack of linking or attribution, it is usually one of these particular practices to which they are failing to adhere, rather than failing to link at all.

The principle of not quoting excessively from others is likewise taken publicly as a virtually universal principle among aggregators, though the question of how much of an excerpt is too much remains an open one. This standard is rooted in two naturalized and deeply held principles: The fundamental injunction against plagiarism within journalism and the obligation to send traffic to sources in aggregation. Particularly among journalists, making use of extensive excerpts — especially with little of one's own material annotating them — is seen as a form of relying on someone else's work in lieu of one's own. For this reason among others — the speed at which aggregation is often performed, concern about the erosion of proper attribution — several observers have expressed alarm about the potential for more prevalent plagiarism with the growth of aggregation as a form of newswork (Fisher, 2015; McBride, 2012; Pexton, 2012). The concern about sending sufficient traffic to sources does not prompt quite the moral consternation that plagiarism does, but it is also a commonly expressed one. Overly long excerpts, the argument goes, reduce the need for the reader to click through to the source for the full story, thus hoarding the traffic that source deserves (Keller, 2011b; McCain, 2008). With a few exceptions — such as point-by-point critiques of whole articles, sometimes known as "fisking" — short excerpts are thus seen as superior, piquing curiosity and fulfilling the ethical obligation to send traffic to sources (Bond, 2011; Jarvis, 2008b; Sklar, 2009).

The most nebulous principle for aggregation is that in order to be truly ethical, aggregation must "add value," principally for the user. This principle is routinely invoked as a defense by those who have been accused of ethical improprieties (Klein, 2015; Stelter, 2009; Wolff, 2010) as well as an admonition for those seeking the proper way to aggregate (Buttry, 2012a, 2012b; McAdams, 2013; Sklar, 2009; Sonderman, 2011). The nebulous aspects of this principle are twofold: The connection between adding value and fulfillment of ethical obligation, and what constitutes adding value in the first place. The ethical link in adding value, though rarely articulated, seems to be that it keeps work from being wholly derivative and parasitical, guarding against plagiarism and bringing it closer to the long-esteemed traditional work of journalism. As for what constitutes adding value, the most commonly cited elements are adding context, analysis, additional factual information through reporting, or simply through thoughtful organization of existing content (Buttry, 2012a, 2012b; Klein, 2015; McAdams, 2013; Sklar, 2009; Sonderman, 2011). Michael Wolff (2010), founder of the news aggregation site Newser, posited a minimalist definition of adding value — simply presenting the key facts of a story in a more efficient manner — that doesn't seem to have gained traction in the writing on adding value that followed. Adding value, as it has been defined, must involve adding information or ideas to the original source, or at least a novel and useful organization of sources. Simply compressing information may be valuable to the reader, but it has not been deemed to be sufficiently valuable from an ethical standpoint.

One of the most telling aspects of aggregation's ethical norms is that despite the frequent flashpoints over aggregators' alleged ethical violations, both traditional journalists and aggregators (as well as those with feet in both worlds) articulate essentially the same ethical norms for aggregation. Instead, the question is often whether those norms are enacted in practice, as well as gradations within those principles. So given the near-constant conflict between the two groups, what are we to make of the fact that they are virtually unanimous in their affirmation of the same ethical values? Two

explanations are particularly salient. First, several of these principles map equally well onto professional journalism's traditional ethical framework as well as the largely blogosphere-born ethics of producing content online, allowing both groups to develop independent justifications for the same ethical principles. Second, the affirmation of common ethical principles is a rhetorical move for aggregators, an important means of signaling their adherence to professional norms and their belonging within the realm of responsible, professional journalists. This image as upstanding professionals has been one of the most sought-after — and most difficult to attain — prizes for aggregators. The following section explains the conflict between the two groups over the nature of their work and its importance for their professional standing.

The Aggregation-Reporting Boundary

Though much of the public and professional discourse on aggregation has centered on economic aspects, the heart of the conflict between aggregation and traditional journalism lies in the work that makes up practice. Specifically, the close proximity of the two forms of newswork has led professional journalism to attempt to distinguish itself from aggregation and more heavily prize the form of work that it can claim as uniquely its own — reporting. Conversely, aggregators and their defenders have attempted to break down the barrier between the two practices and claim professional status for themselves by noting the deep similarities between aggregation and reporting. This conflict has heightened as journalism has been enveloped by a digital environment over the past decade. Since virtually all journalists are doing their work online in some form, it is no longer particularly useful to make distinctions between journalists based on the place where their output lives (i.e., online vs. traditional media). Instead, the more useful distinction is based on the type of work they do, which has pushed reporting/aggregating to supplement traditional/online as a primary aspect of differentiation among journalists. As we will see, aggregation work runs up against and overlaps significantly with not only reporting, but other forms of newswork such as

editing and TV news production as well. But it matches most directly with reporting, both in the public discourse on aggregation and in the similarities and differences between their ways of establishing knowledge, as I will address in Chapter 3.

Traditional journalists tend to see the content produced by aggregators as shallow, simplistic, and ephemeral, in contrast with the substance of their own output — an argument made most cogently in academic form by Erik Neveu (2014), who contrasted the work of aggregation and the work of narrative journalism — one of the most professionally valorized subsets of contemporary journalism — as "in a structural opposition" (p. 537). For journalists, this binary often ties into a characterization of the type and amount of work that goes into producing the content. The core of this work among professional journalists is reporting — the process of using observation, interviews, and documentary evidence to assemble into facts that I will examine in more detail in the next chapter. In professional discourse, reporting is often referred to as "original reporting" or "shoe-leather reporting," in which bearing witness, embodied physical presence, and proximity to news events take on heightened importance. It is central enough to journalism to be described as the sole source of the "iron core of information" that makes up the bulk of journalism's democratic value (Jones, 2009, p. 1). Media critic Jay Rosen (2015) describes American professional journalism's veneration of "shoe-leather reporting" in vivid detail, referring to it as "the one god an American journalist can officially pray to" and stating that "There can never be enough of it. Only good derives from it. Anything that eclipses it is bad. Anything that eludes it is suspect. Anything that permits more of it is holy" (para. 1-2).

Scholars have long noted the singular importance of reporting to journalists' professional identity and its status to journalists as a distinguishing feature of their profession (Anderson, 2013a; Coddington, 2014a; Darnton, 1975; Ericson, Baranek, & Chan, 1987; Krause, 2011). That valorization of reporting emerges especially strongly when journalists juxtapose it with aggregation work. Aggregation is often set in

opposition to reporting, as journalists contrast the quick work of aggregating a story with the extensive reporting work that went into the story's source (Shapira, 2009). Journalists also tend to characterize aggregation and reporting as zero-sum; an increase in the former is necessarily a setback for the latter. In an otherwise magnanimous response to a *Forbes* story that aggregated one of his feature articles and garnered traffic that far outstripped his own, *New York Times* reporter Charles Duhigg made a striking assertion of the incommensurability between aggregation and reporting and the superiority of the latter: "[E]very hour spent summarizing is an hour not spent reporting. And at the end of the day, this job is only really fun if you discover what no one else already knows" (Romenesko, 2012, para. 19). Duhigg distilled a key assertion among journalists regarding reporting and aggregation: The two may be zero-sum, but they are not equal in value. As these journalists characterize it, aggregation directly eats into reporting's prevalence in journalism, but it cannot replace reporting (Keller, 2011b; *The New Republic*, 2011). To them, reporting is the *sine qua non* of their profession; nothing can substitute for it, let alone aggregation, a practice that is inherently dependent on reporting for its very existence. Not only is aggregation a vastly different and inferior practice than the one their profession was built around, they argue, but it represents a grave threat to the survival of that practice, and by extension, the profession.

Defenders of aggregation have responded by questioning the validity of the distinction between reporting and aggregation, noting that many of the practices journalists decry as inferior are quite similar to ones they have practiced as part of their reporting. Reporters, they argue, have been rewriting versions of competitors' published stories for ages, along with hastily composing stories from press releases and wire copy (Connelly, 2011; Niles, 2010, 2011; Nolan, 2010). More broadly, some of them argue that all reporting is a form of aggregation — a process of pulling together information from disparate sources, both published and unpublished, and weaving it together into a tightly summarized narrative (Jenkins, 2012; Klein, 2015; Niles, 2010, 2011). Some of

aggregation's antagonists have conceded much of this point; former *New York Times* editor Bill Keller, who wrote two widely publicized pieces criticizing aggregators such as The Huffington Post (Keller, 2011a, 2011b) has also acknowledged that "The distinction between original journalism and aggregation is more a continuum than a binary distinction" (Bond, 2011, para. 27). Charles Duhigg, the *Times* reporter who articulated the zero-sum relationship between reporting and aggregation, said in the same email that "Every journalist relies on other people's work" (Romenesko, 2012). The question, then, is just how far apart reporting and aggregation are on the continuum, and how prevalent the version of information gathering known as reporting has been within professional journalism past and present.

A look at the history of aggregation in American journalism and the nature of reporting work indicates that reporting is not as dominant nor as distinct from aggregation as journalists tend to assert. Most of early American journalism was much closer to aggregation than journalism, with 18th- and early 19th-century newspapers consisting primarily of re-printed letters and columns from other publications interspersed with their own broadsides and short notices of business and political happenings (Barnhurst & Nerone, 2001; Cordell, 2015; Garvey, 2013; Schudson, 1978, 2011). The Postal Act of 1792 encouraged this type of re-printing of others' content, allowing newspapers to exchange copies for free with one another, and by the 1840s, the average newspaper received 4,300 exchange copies a year. As a result, the non-local news that filled the newspaper in the early 1800s came overwhelmingly from other papers, reprinted in full and used without express permission, and with credit that was often incorrect (Cordell, 2015; Garvey, 2013; Schudson, 1978; Starr, 2004, p. 90). Observed media critic Joshua Benton (2010), "It was a system designed to inspire what many people today would consider rampant theft of news." But as Garvey (2013) notes, this widespread republishing of content was not a matter of shame but of professional

pride, as the "exchange editors" responsible for this work saw their work as sagely separating wheat from chaff.

It was not until the mid-1800s that reporting developed as a practice; until that point, newspapers had been one- or two-person operations, with friends or travelers obliging as correspondents. The penny papers were the first to employ reporters and foreign correspondents, and by the late 1800s, reporting began to crystallize into a systematic and professionalized form revolving around the use of interviews and observation to gather information that could be distilled into facts (Schudson, 1978, 1994).

During the next 125 years or so, reporting enjoyed its heyday within journalism, dominating its practice and arising alongside objectivity to form a key part of journalists' professional identity, particularly during the "high modern" period that reigned in journalism after World War II, when objectivity, political and commercial independence, and fact-based investigative reporting were particularly prized (Hallin, 1992b; Krause, 2011; Schudson, 1978; Schudson & Anderson, 2009). Even during this period, however, examples of aggregative work arise: *Time* magazine began with a promise to read and digest "every magazine and newspaper of note in the world" (Brinkley, 2010, para. 30), and the Scripps newspapers developed a writing style called "condensation" in the 1870s and 1880s that consisted of copying stories from rival newspapers or the wire and rewriting them brief, summarized form (Kaplan, 2002).

Today, as several aggregation advocates have argued, reporting's dominance within newswork is weakening. For a variety of reasons — cuts in newsroom staff, shifts toward corporate and public ownership, the growing power and prominence of public relations — more newswork consists of simply rewriting press releases or work published elsewhere with a phone call or two to fill the story out (Lewis, Williams, & Franklin, 2008; Phillips, 2012). Boyer (2013) has argued that the dominant form of work in contemporary journalism is not pounding-the-pavements journalism marked by firsthand

observation and in-person interviews, but screenwork — sedentary, solitary, and reactive. American journalism appears to be nearing the end of a period we might call "the reporting parenthesis," a time beginning in the late 1800s when reporting was the prevailing form of journalistic work. As the work of journalism shifts back toward gathering and re-presenting published material, it is not so much developing a new mode of work as it is returning to the type of activity that dominated its practices during the 18th and early 19th centuries, but infusing it with more technologically driven immediacy and a more modernist veneration for fact and verification. The screen-based aggregative work of gathering information from published sources may be coming to dominate the work of journalism, but journalism's professional values remain largely unchanged. This dissonance between practice and values is a major part of what has driven journalism's increasing reverence for reporting in opposition to aggregation, despite the latter's prevalence in practice. Reporting remains closely aligned with the modernist professional values around which journalism has been built, but aggregation represents a juxtaposition of pre-modern journalism's open reliance on other published sources with a modernist fixation on verifying knowable facts, a hybrid that is more difficult for journalists to embrace.

It is important not to set too firm of a binary distinction between reporting and aggregation, however, because as researchers of aggregation have found, the two are quite tangled in practice (Anderson, 2013a, 2013c; Boyer, 2013). Reporting is at its core an aggregative activity; both reporters and aggregators "compile shards of facts, quotes, documents, and links together in order to create narrative-driven news stories" (Anderson, 2013c, p. 1021). Reporters are, as Joshua Benton (2010) argues, not fundamentally creators of information, but instead (quite creative) conduits of information, often producing what sociologist Mark Fishman (1980) once described as "wholly an account of an account of an account of an account" (p. 87). Within individual journalists' work, aggregation and reporting overlap as well. As I will show in Chapter 8,

many aggregators also do more traditional reporting work as part of the same job, so that aggregation and reporting exist more in tandem for contemporary journalists than as opposites.

Reporting and aggregation may be closely related, but they are not, however, identical. Anderson (2013c, p. 1022) characterizes the fundamental point of difference between the two in terms of objects of evidence; aggregators have accepted digital objects such as websites and links as their fundamental objects of evidence, while reporters are more tied to analog evidence, which ties the two into divergent news networks, one dealing primarily with digital evidence and the other with analog. He characterizes aggregation as a form of "second-order newswork" (2013a, p. 56), operating on information that other journalists have already produced and more closely related to the historic journalistic work of editing and design. Much of the difference between aggregation and reporting is wrapped up in two factors. First, while much of modern reporting still takes place largely within analog contexts, news aggregation takes place almost entirely online. Second, aggregators and reporters use different types of information to construct facts and stories in different ways. I will explore the background of the first factor (the nature of online news production) in the final section of this chapter, and the background of the second (the process of knowledge construction through reporting and aggregation) in the following chapter.

ONLINE JOURNALISTIC WORK

Identity

News aggregation takes place nearly entirely online, making it part of a larger subset of journalistic work that takes place online and is deeply shaped by that context. Aggregation shares much in common with this work, which includes web production, social media management, audience development, and other related forms of digitally based newswork. I conclude this chapter with a brief sketch of the literature on online

journalists — first their identity, and then their practices — to shed light on the overall professional climate in which the aggregators I study are working.

Since the early days of the emergence as a distinct form of journalistic work around the turn of the century, online journalists have been marked by a constant tension between change and continuity, even more so than journalists more generally. As Hartley (2013) notes, these journalists act as a key connection point between news organizations and new technologies, continually encountering, testing, and adopting new technological forms and evaluating new norms. Yet they often remain in the midst of a traditional newsroom, being forced by that proximity to repeatedly confront the question of how what they do aligns with their organization's traditional norms and practices. As a result, these journalists often end up selectively adopting professional journalistic values and practices, maintaining an ambivalent and at times contradictory hybrid of emergent norms and practices and adherence to traditional values (Agarwal & Barthel, 2015; Vobič & Milojević, 2014). This ambivalence is heightened by their own marginal professional status; without many of the most highly regarded journalistic skills (such as reporting, interviewing, or longform narrative writing) or the markers of professional and organizational status, they are often seen as inferior to traditional journalists (Colson & Heinderyckx, 2008; Hartley, 2013; Siapera & Spyridou, 2012). Online journalists thus tend to be both suspicious of institutional prestige and zealous to gain their own in order wield some professional authority (Agarwal & Barthel, 2015). This ambivalence is evident among aggregators more specifically as well. Anderson (2013c) found that aggregators were not as concerned as reporters about the occupational boundaries between the two groups, but Boyer (2013) found that aggregators were adamant about the value and journalistic nature of their work, working hard to articulate their specialized areas of expertise in order to justify their status professionally.

There are several obstacles to the development of coherent professional norms among online journalists: Their varying degrees of orientation to the larger field of

professional journalism, their lack of common training, and their relative lack of autonomy from their organizational superiors, all of which limit their ability to collectively form and articulate consistent professional norms (Singer, 2003; Weaver, Beam, Brownlee, Voakes, & Wilhoit, 2007). Still, online journalists have used their limited institutional resources to develop their own professional identity and some normative distinctions (Deuze, 2008, p. 208). Transparency has emerged as a dominant norm in online journalism, particularly in contrast with traditional journalism's objectivity and drawn in part from the blogosphere's norm of privileging individual voices over neutral objectivity as a source of truth (Agarwal & Barthel, 2015; Lewis & Usher, 2013; O'Sullivan, 2012; Wall, 2005). Though results of studies on online journalists' professional role conceptions are mixed, researchers have generally found somewhat heavier support among online journalists for an interpretive role (Agarwal & Barthel, 2015; Shoemaker & Reese, 2014; Weaver et al., 2007). On the whole, online journalists tend to view their main contribution to professional journalism as the production of fast, concise, trustworthy, and technically sophisticated news, and end up elevating those values correspondingly (Boyer, 2013; Usher, 2014; Vobič & Milojević, 2014).

Practices

The practices of online journalism, including news aggregation, are characterized by a work environment that is vastly different from the much of journalism's modern era, though more offline forms of journalism are increasingly being practiced in these conditions as well. I will briefly examine three of them here — precarity, immediacy, and screenwork.

Precarity has become a dominant characteristic of media work in general, with organization dominated by flexible, temporary, heterarchical organizational structures and a chaotic and conflict-prone creative process (Deuze, 2007). Journalism is particularly prone to these factors because of the collapse of the financial models on

which its dominant institutions have rested and the downsizing and destabilization of the field that resulted. The deeply entrenched labor force that filled newsrooms in the late 20th century has given way to a younger, more flexible brand of newsworker whose work has tended to focus on online forms (Anderson, 2013a). These online journalists are particularly vulnerable because of their marginal professional status and because they are rarely given permanent salaried employment. The result among online journalists is more mobility and instability, and a shift away from institutional orientation toward a free-agent mentality (Deuze, 2008; Schlesinger & Doyle, 2015; Vobič & Milojević, 2014).

Immediacy is "an overarching, defining feature of online journalism" (Usher, 2014, p. 11), a guiding principle within contemporary newsrooms that has been naturalized as a continually felt pressure — what Boyer (2013) refers to as constant "next-ness" (p. 69) that eliminates endpoints and makes anticipation a permanent fixture. As journalists feel it, this pressure originates from the audience and technological factors — i.e., something demanded by "the Internet" — and outside of journalists' control (Örnebring, 2010; Schmitz Weiss & de Macedo Higgins Joyce, 2009; Usher, 2014). The result is a relentless pace of work with little time for reflection on its broader nature or purpose. While some journalists have expressed concern about the potential constraints of this often frenzied workflow on news judgment, the acceleration of journalistic work continues essentially unabated (Anderson, 2013; Boczkowski, 2010; Boyer, 2013; Quandt, 2008; Usher, 2014).

While journalism has traditionally been seen as a relatively kinetic activity, online journalism is overwhelmingly desk work, often physically isolated but intensely connected through online means (Deuze, 2008; Paulussen, 2012). Boyer (2013) ties that work more specifically to screens, developing the term "screenwork" for the kind of intensely and constantly mediated work that uses screens as a sort of all-encompassing system for processing and producing an unending digital flood of information. He describes screenwork as both sedentary and isolating but also filled with constant action,

requiring disciplined focus to maintain the attentional hierarchies necessary to make meaning of the incoming information flow. Screenwork is, as Boyer puts it, both treadmill and craft, marked by both agency and automation.

Researchers have found many of these attributes of online journalism exhibited in aggregation work; it involves exercising rapid-fire discernment regarding a constant flow of information, reading and writing quickly, and doing so in an environment that is often unstable and chaotic (Agarwal & Barthel, 2015; Anderson, 2013c; Phillips, 2012). More than other forms of online journalism such as audience development and social media management, however, aggregation is reliant on the exercise of news judgment — the shifting and amorphous knowledge that drives the ability to choose what pieces in the flow of information to select, reorganize, combine, re-produce, and how to do all that (Agarwal & Barthel, 2015; Anderson, 2013a; Kovach & Rosenstiel, 2010). News judgment is the same ineffable quality that professional journalists have long said lies at the core of their work, thus forming a crucial professional connection between aggregation and traditional journalistic work. But the nature of that knowledge — and specifically the means by which journalists weigh and assemble evidence into factual narratives for public consumption — remains a key point of potential distinction between aggregation and reporting, and that process will be covered in the following chapter.

CONCLUSION AND RESEARCH QUESTIONS

In sum, then, the contradiction between aggregation's inextricable ties to professional journalism and its marginal and subordinated place within the profession has manifested itself in fraught relationship with the larger journalistic field marked by continual wrestling over its professional legitimacy and identity. Aggregation has engaged in rhetorical struggle with professional journalistic critics for the past decade over its validity as a practice, yet its practices both closely resemble those of professionally venerated "shoe-leather" reporting and remain part of professionally liminal online journalism. Aggregators function in a conflicted space between the

newsgathering techniques of traditional professional journalism and the efficiency and professional precarity of online forms of journalism. Their public self-articulation bears an appropriately ambivalent professional orientation, as they argue for professional legitimacy by pointing out the deep ties between their work and that of reporting, but also by articulating a distinct set of ethical principles undergirding their work. In this study, I plan to clarify this professional marginality and ambivalence on the part of aggregators through the following research questions:

RQ1: What are the major characteristics of news aggregation work?

RQ1a: How do the characteristics and conditions of their work compare to those of online and traditional professional journalism?

RQ2: How do aggregators perceive their own professional status relative to the journalistic field?

RQ2a: How do they interact with and perceive non-aggregators within professional newsrooms?

RQ2b: In what ways do they seek out professional status and legitimacy?

RQ3: What ethical and professional norms do aggregators articulate and enact?

RQ3a: What role do those norms play in establishing aggregators' professional identity and legitimacy?

THEORETICAL BACKGROUND

Chapter 3: Journalistic Epistemology and Knowledge Production Practices

This study examines aggregation as an emerging form of producing, arranging, and presenting journalistic knowledge, one that both draws from and diverges with the conventional journalistic process of reporting. Aggregation and reporting are both forms of newswork meant to assemble reliable information about current events of public interest, but they differ broadly in the type of information gathered, the processes used to produce and assemble it, and the way that information is intended to be understood as knowledge by its audience. The fundamental influence informing their differing work practices, then, is epistemological — what they consider to be valid and useful factual information for the public, and how that information is gathered and verified. In order to evaluate these differences, it is necessary to delve into the epistemological roots of modern journalism as practice of public knowledge production.

In the previous chapter I defined and situated aggregation as a practice, outlining the similarities and professional tensions between aggregation and traditional reporting and placing it within the context of online journalistic practices more generally. In this chapter, I will lay out another key tension outlined in the introduction to this study, demonstrating how aggregation sits in a contested, liminal position regarding journalistic epistemology, drawing on journalism's traditional understanding of facts and how they are determined and verified, but without access to the actual practices and processes of reporting that underlie that understanding. In place of that traditional understanding, aggregation forms an amalgam between journalism's realist epistemology and the more constructivist and pragmatist epistemology that characterizes journalism on the web. I will make this argument first by outlining the role that epistemology plays in establishing journalism's authority and in constructing its accounts of reality. I will then describe traditional journalistic epistemology as a primarily realist practice built around gathering

facts that are based on a complex hierarchy of evidence led by observation, interviews, and documents; the methods of gathering and weighing this evidence and interpreting them as facts are what we know as reporting. Finally, I will examine the challenges to this modernist journalistic epistemology and the role of aggregation in relation to it. In doing so, I will show how aggregation is rooted in web-based informational characteristics such as linking and speed that challenge this traditional realist epistemology by inconclusively presenting divergent viewpoints alongside each other and challenging the efficacy of journalistic verification. At the same time, aggregation lacks the means of gathering evidence through reporting, making the evidentiary means by which journalistic knowledge is justified and understood both more open and more uncertain.

EPISTEMOLOGY OF JOURNALISM

Epistemological principles underlie all of human cognition, addressing the fundamental questions of what we are capable of knowing and how we know what we know, and thus forming the foundation of fields as broad and diverse as philosophy, theology, science, and history over several millennia. But epistemology — the study of the nature of knowledge and acceptable evidence, and the criteria by which truth and reality are apprehended and judged as valid (Anderson & Baym, 2004) — has a more particular application to those professions, like journalism, whose purpose is to produce knowledge. Ekström (2002) distinguishes two approaches to epistemological inquiry, philosophical and sociological, by defining philosophical epistemology as theories of knowledge and truth and sociological epistemology as the rules, routines, and procedures that determine the form of knowledge and the expression of knowledge claims. As Ettema and Glasser (1987) make the distinction, sociological study of epistemology is focused on what journalists see as acceptable knowledge claims, rather than attempting to determine whether those knowledge claims themselves are valid. Sociological epistemology has been the foundation for much of the epistemological inquiry into

journalism (e.g., Ettema & Glasser, 1998; Fishman, 1980; Tuchman, 1978), and it is particularly appropriate for journalism as a profession in which knowledge is produced as form of work. Philosophical and sociological epistemology are certainly related — epistemological procedures and routines in practices such as journalism are simply applied epistemology (Hearns-Branaman, 2011) — but it is useful in this case to emphasize the sociological elements of epistemology as a way to show how macro-level beliefs about the nature of knowledge are embodied in social practices, thus providing a bridge between those beliefs and journalistic and aggregative practices.

As a practice rooted in gathering and broadly disseminating information on issues of public interest, journalism's epistemological values and procedures play an outsized role in building its legitimacy before the public. The knowledge journalists provide is relatively limited; being focused continually on the present, it is ephemeral and does more to orient the public than inform it (Park, 1940). But despite those limits, that knowledge is critical to their authority. Journalists' main claim to social authority is their ability to provide reliable information on current events, and that claim rests on the public's acceptance of that information's correspondence to reality and the means by which it is produced and verified (Ekström, 2002; Harbers & Broersma, 2014; Zelizer, 2004). Journalistic epistemology — and particularly the public's acceptance of journalists' epistemological methods — is also crucial to its democratic value. If one of journalism's primary purposes within a democracy is to serve as a source of the knowledge used by the public to effectively self-govern (Scheuer, 2007; Schudson, 1995), then it is not enough for journalists to merely produce knowledge; that knowledge must be consumed and believed in order to properly be transferred to the public (Goldman, 2008).

To the degree that their epistemological principles and practices are regarded as valid, journalists generate epistemic authority, as their authority over those beliefs and practices yield authority to determine what counts as fact and valid representation of

reality (Carlson & Peifer, 2013). The goal, then, of knowledge production, journalistic or otherwise, is control over the social environment and the ability to both render it knowable and delimit its boundaries (Ericson et al., 1987). In addition to the knowledge claims themselves, the process of knowledge production is important to perception of validity and the authority that comes with it; it is not enough for journalists to persuade the public that the knowledge they create is valid, but the methods by which they produce that knowledge must be seen as valid as well.

This has become especially problematic in recent years, as public trust in both expert knowledge and journalistic methods have withered. In recent decades, the public has steadily placed less trust in professionally produced knowledge, in the notion of expertise, and in the institutions that produce and validate such knowledge, all of which have chipped away at the foundation of public trust on which journalists' social authority rests (Boyce, 2006; Reich, 2012; Schön, 2001). The result is that "the notion that journalists or anyone else can arrive at a truthful account of things or follow an objective method of verification has been eroded in the public mind" (Kovach & Rosenstiel, 2007, p. 85-86). Journalistic epistemology is thus particularly important and imperiled, and within this context, aggregation provides both a further challenge to the legitimacy of the conventional epistemological practices of journalism and a possible avenue for those practices to evolve.

Epistemological Research into Journalism

Much research has examined journalistic epistemology, but it has tended to be somewhat narrow in scope. Of all the subfields of communication, journalism studies has shown the most interest in epistemology (Anderson & Baym, 2004), though given the news media's importance in defining social reality for much of the public, the means by which journalists produce knowledge about that reality has received relatively little attention within fields outside journalism studies, such as the sociology of knowledge (Ekström, 2002). Within journalism studies itself, recent scholarly inquiry into the

epistemology of journalism, particularly in relation to emerging digital spaces, has been relatively thin. This may be in part because epistemology is difficult to concretize and observe in journalistic practice, because of epistemology's foundation in esoteric realms of philosophy and because its taken-for-granted nature makes it difficult for researchers to elicit insightful reflection on it from journalists themselves (Godler & Reich, 2013a).

For decades, research into journalists' epistemological principles and practices has centered on the objectivity norm. A voluminous amount of research has illuminated virtually every nook and cranny of objectivity as it plays out in journalism, but as Cottle (2000, 2007) notes, journalistic epistemology is much broader and more varied than that norm alone. Cottle calls for deeper research into journalistic epistemology beyond objectivity; in addition, such inquiry should deal more substantively with how journalists' epistemological principles are enacted in practice. As Ekström (1996) notes, journalists' epistemological problems are often reduced in practice to a matter of routines, so studying those routinized practices and forms may be a particularly fruitful means to examine how they perceive and produce knowledge. In Ekström's (2002) division of epistemology into the form of knowledge and production of knowledge, the latter — the rules and procedures that guide the way knowledge is produced — has tended to receive less attention than the former, which focuses on the type of knowledge that ends up being presented to the public. This study focuses on that production as a window into the principles and values by which journalists conceive of and create knowledge.

Scholarship into journalistic epistemology, by and large, originates from a constructivist perspective, a paradigm sharply at odds with that of professional journalism. As we will see, the epistemology of modern journalism is fundamentally realist, an epistemological perspective dating back at least as far as Aristotle but that became dominant in the mid-19th century (Mindich, 1998; Schudson, 1978). Realism holds that the world consists of objects and states of affairs that exist independently of how they are conceived by any human mind — a reality "out there." Truth and

knowledge in realism are based on the correspondence theory; representations should correspond with that external reality and are considered to be truth, or knowledge, when they do, and falsehood when they do not (Lichtenberg, 1991; Merrill & Odell, 1983; Putnam, 1981). Realism separates the existence of truth from the ability of any one person to justify a particular claim to that truth, and believes that language can be a reliable signifier of objects (Fiske & Hartley, 1978; Ward, 2009).

The social constructivism that colors much of the research into journalistic epistemology, on the other hand, denies that we are capable of knowing or understanding any external, independent reality. Reality is something that we produce ourselves through social interaction and live within, and our experience with what we perceive as reality is always mediated by language and our own culturally embedded perspectives. Since there is no way to escape the influence of culture altogether, there can be no independent perspective through which reality can be known (Carey, 1989; Fiske & Hartley, 1978; Putnam, 1981). Constructivists do not simply hold that cultural and social factors influence the way we — and the media — perceive reality; most realists readily acknowledge this as well. Beyond this, constructivists hold that since reality is a social construction, there is no definitive way to adjudicate between claims regarding reality held among competing accounts based on an external standard (Lichtenberg, 1991). This incommensurability between scholars of journalistic epistemology and the journalists they study has resulted in a strongly critical strain running through much of the work in this area, in which scholars often argue that the version of reality constructed by the news media privileges those in power and that alternate conceptions of reality are systematically marginalized by those media constructions (e.g., Ericson et al., 1987; Gans, 1979; Hall, Critcher, Jefferson, Clarke, & Roberts, 1978).

The constructivists' central contention, that reality itself is a social construction and thus no reliable way exists to adjudicate between conflicting views of it, seems to me to be untenable as a long-term framework for analysis of journalistic accounts of social

reality. As Lichtenberg (1991, p. 222) argues, we can only evaluate the ideological and constructed nature of news if we have a concept of more and less faithful, and believe it is possible to escape our own preconceptions to produce better renderings of reality. Indeed, even constructivist critiques of news depend on alternate views of reality as benchmarks against which journalistic accounts are measured, and to the extent that they are critical, they ultimately view those alternative accounts as more valid in their representations of reality than the journalistic ones they critique. My own view of reality edges closer to the critical realists, who believe that an un-constructed reality does exist, but at a structural level that is difficult to perceive in everyday life (Lau, 2004). Still, the constructivist critiques of journalistic accounts of social reality are trenchant and are the basis of this study's analysis of journalistic and aggregational epistemology. News is not fundamentally a reflection of a knowable, external reality, but instead a construction — a value-laden production of reality that corresponds with organizational needs, structural power, and professional ideology rather than any independent and verifiable reality (Ettema & Glasser, 1998; Hackett, 1984; Tuchman, 1978). Such a knowable reality may well exist, but it is not the one we view in the news. The latter is far from being a mirror of the former, distorted or otherwise; it instead bears so little resemblance that the two may be thought of as inhabiting different realms entirely.

MODERN JOURNALISTIC EPISTEMOLOGY

Journalistic Realism and its Consequences

Modern American journalism was built on the epistemological foundation of realism, which rose to prominence in the late 1800s, around the same time journalism shifted from the partisan political domain of printers and publishers to a more formalized information-gathering practice built around the emerging profession of the reporter (Mindich, 1998; Schudson, 1978). By the early decades of the 20th century, the academy had largely abandoned its belief in a philosophy or scientific process built on what is now called "naïve realism" or "naïve empiricism" — the belief that reality could be so closely

mirrored by our representations of it that commonly held facts were not simply statements about the world but actual aspects of reality itself (Schudson, 1978, p. 6). Several scholars have asserted that into the last decades of the 20th century, journalists remained a distinctive holdout hanging onto the tenets of naïve realism, continuing to allow it to inform the way they recognized and interpreted events and facts as newsworthy (Gans, 1979; Ettema & Glasser, 1998; Hackett, 1984; Manoff, 1986). While we will see that journalists are not as naïve in their realism or devoted to it as they have been claimed to be, they remain primarily animated by the realist belief that reality presents itself as a series of events to be selected, understood, and depicted as faithfully and objectively as possible. The idea that "journalism's first obligation is to the truth" (Kovach & Rosenstiel, 2007, p. 36) is so enshrined in the professional journalistic mind-set as to be common sense (Hanitzsch, 2007), and journalists' realist/positivist paradigm holds that this truth is available to the observer's eye (Frus, 1994). Modern American journalists by and large have believed that there is a reality "out there" that they should strive to depict, and that to a large degree they are capable of depicting through adherence to a set of methods meant to gather information with minimal subjective interference (Godler & Reich, 2013a; Hackett, 1984; Kovach & Rosenstiel, 2007; Molotch & Lester, 1974; Peterson, 2001). This belief is essentially realism's correspondence theory in practice.

Journalists have long used the language of science to talk about their approach to reality and their methods for gathering information about it. Many journalists from the 1890s through the 1930s expressed an admiration for science and invoked scientific language as a rationale for their own reporting methods (Schudson, 1978; Tuchman, 1978). Chief among them was Walter Lippmann, who articulated a method of objective reporting based on the scientific method of gathering evidence through established procedures in order to form conclusions about the nature of reality (Lippmann, 1920/1995; Streckfuss, 1990). It is notable, however, that Lippmann advocated a form of

reporting built on a positivist notion of science not because of a naïve belief in facts, but because of his skepticism that the facts most people held were based merely on the "pictures in their heads" rather than any definitive notion of reality (Lippmann, 1922/1961; Schudson, 1978). The orientation toward positivist science goes beyond journalism in particular; professional knowledge more broadly, of which journalism is a form, is rooted in positivism and focused on the application of scientific knowledge through practice (Schön, 2001). In practice, of course, journalism does not actually engage in anything resembling a formal scientific method. Journalists operate on hypotheses, but those hypotheses take the form of hunches and common-sense assumptions rather than theoretically grounded propositions; their data thus doesn't verify or generate theory, as science's does (Phillips, 1976). Likewise, as we will see, the reporting methods used to carry those hypotheses out are fundamentally a product of organizational constraints, production routines, and ideological commitments at least as much as they are systematic attempts to determine reality.

There are several deleterious consequences of this distorted derivative of scientific realism practiced by modern professional journalists. Because the methods of reporting do not derive from or feed into theory, the resulting journalistic conception of knowledge is rooted heavily in a personal, ineffable form of common sense. As common sense, it is a taken-for-granted form of knowledge that resists codification and self-examination and closes off alternative ways of knowing that challenge naturalized ideological assumptions (Campbell, 1991; Ericson et al., 1987). In addition, a lack of self-scrutiny regarding journalism's epistemological principles helps lead journalists to conceive of truth simply in terms of the accuracy of individual facts, overlooking their own role in conveying meaning as well as information (Ekström, 2002). This reduces reporting work to a simple means of gathering justification for particular factual claims and results in a form of objectivity that is not a rigorous means of determining verifiable claims to reality but is instead a "strategic ritual" of routinized procedures meant to shield

journalists from inaccuracies and accusation of partiality from critics (Ettema & Glasser, 1998; Tuchman, 1972).

But as the social constructivists and media sociologists have demonstrated, modern American journalism's realist belief that its work is a quasi-scientific effort to determine an external reality and represent it as a faithful rendering of that reality is a self-justifying fiction. The news is not a "mirror" of social reality as journalists have so often claimed, but an ideologically grounded construction shaped by economic, organizational, logistical, and material forces and constraints but often presented as if it were naturally arising from reality itself. News is not the inevitable product of events, but necessarily shapes representation of those events "in ways which are not pregiven in the events themselves" (Hackett, 1984, p. 234), simply in the construction of those events as newsworthy or non-news, much less in the accounts of the events themselves. This doesn't mean journalists concoct events or reality out of thin air; they still rely on actual occurrences, which they use as the raw material to fashion into a particular vision of an ordered, knowable social reality that does not actually exist in the unruly, unbounded environment in which those occurrences actually take place.

Journalists have long been aware of these tensions within their representations of reality. Lippmann famously declared that "news and truth are not the same thing, and must be clearly distinguished" (1922/1961, p. 358), arguing that reporters' accounts of the world are products of the same misleading stereotypes and subjective lenses that color everyone's perceptions of reality. The realist concept of professional objectivity has been under assault from journalists about as long as it has been formulated. Mindich (1998) identifies only one decade, the 1890s, when the objectivity norm existed essentially unquestioned within journalism, and Schudson (1978) notes that objectivity was widely seen as an unattainable myth as early as the 1930s and became a term of abuse within much of professional journalism by the 1960s. Journalists are often conscious of many the conventions by which they construct stories and tend to be circumspect about the

extent to which they can claim they have captured the truth in news accounts (Ettema, 1987; Ettema & Glasser, 1998; Kovach & Rosenstiel, 2007). Journalists' skepticism about their own ability to definitively capture reality has grown in recent decades, as they become more cynical about the degree to which states of affairs are being manipulated by those in power and more self-consciously revealing of their own role in the news production process, whether through more obtrusive mediation of televised news or greater self-disclosure in online social networks (Baym, 2004, 2009; Lawrence, Molyneux, Coddington, & Holton, 2014). The result is a conception of knowledge built on the now-crumbling foundation of realism but bearing more of the marks of pragmatism, striving after truths that are not necessarily absolute but demonstrate enough coherence to serve as a basis for action — "truths by which we can operate on a day-to-day basis" (Kovach & Rosenstiel, 2007, p. 42; Godler & Reich, 2013b; Hearns-Branaman, 2011).

The Production Process of News Knowledge

The process of producing news knowledge consists predominantly of reporting. Editing surely plays a substantial role in that process as well, but it revolves around reporting work: Editors primarily assign or approve stories to be reported and refine the news products created through the reporting process, arranging them to form a larger whole. Though editors play an influential role within the organizational culture of the newsroom (Darnton, 1975; Gans, 1979), the central process of turning social occurrences into public knowledge in the form of news is that of reporting. As Ekström (2002) notes, reporting is defined by the considerable amount of knowledge it produces in an extremely constrained amount of time, with that knowledge being distributed at generally regular, frequent intervals. These constraints mean that journalists don't have time to rigorously confirm all of the knowledge they produce, so they're forced to rely on "an established network of sources who deliver information that is assumed, a priori, to be justified" (Ekström, 2002, p. 270). Their main task in reporting, then, is to translate the specialized

knowledge of these implicitly trusted sources into generalized knowledge that can be absorbed as a common-sense understanding of the world by the public (Ericson et al., 1987). In translating this knowledge under these logistical limitations, the reporting process inevitably ends up reproducing these official, bureaucratically verified sources' knowledge. It does so by turning occurrences, utterances, and states of affairs into facts, based on evidence weighed through news judgment. The following section examines the role each of those components plays in the creation of news knowledge through the reporting process, moving from facts to the central forms of evidence, to news judgment and the verification process by which they are validated for the public and confirmed as reliable. As I examine each component, I will also address the ways in which each is being challenged in the contemporary digital media environment.

Facts

Facts are the central piece of journalistic epistemology, the container in which truth as journalists conceive of it comes packaged. Within the paradigm of journalistic objectivity which seeks to separate facts from values, facts "are assertions about the world open to independent validation. They stand beyond the distorting influences of any individual's personal preferences" (Schudson, 1978, p. 5). Facts are given such a privileged relationship with truth and reality that they are often taken as objects or occurrences themselves, rather than statements about those phenomena (Romano, 1986). As White (1970) notes, unlike objects or occurrences, they cannot be created, destroyed or begin or end, though they can challenged or proved in ways those objects and occurrences cannot. Instead, facts can be thought of as representations of reality that are accepted as reality — not completely independent of the way we perceive the world, but independent of the way any given individual might perceive the world (Ericson, 1998, p. 84; Merrill & Odell, 1983, p. 74). To paraphrase Daniel Patrick Moynihan's famous statement, facts are something no one is entitled to have their own set of, because they are seen as existing beyond the level of individual judgment.

Though objectivity has long sought to separate facts from values, the two are intrinsically intertwined. Values, particularly the modernist value of rationality, are necessary to understand facts as justified, and they also guide the process by which we focus on particular facts and seek to establish them as verified (Ettema & Glasser, 1998; Putnam, 1981). All facts are theory-laden, and in journalism, all of them are constructed through professionally validated methods that involve interpretation, though some require more interpretation and construction than others (Lichtenberg, 1991; Tuchman, 1978). Because of these inherent connections between fact and value, journalists often have a difficult time determining the difference between facts and interpretation in their own work, even though their professional ideology calls for them to separated (Tuchman, 1978).

Reporting is thus the process of "construing and constructing factuality" (Ericson et al., 1987, p. 102) — turning occurrences and states of affairs into facts by gathering and evaluating evidence around them, placing them in connection with other facts as part of a self-validating "web of facticity" (Tuchman, 1978, p. 86) so they can be interpreted, and arranging the facts from that web into narrative form for efficient and authoritative communication. This hasn't always been the fundamental work of journalism. In 18th-century American journalism, a "fact" didn't refer to verified information taken to represent reality, but only to a single, perspectival account such as a correspondent's letter or a witness's testimony (Ward, 2004). It was only in the mid-19th century, when American society shifted to a more secular, utilitarian, and scientific orientation, that facts became the central product of journalism and the orienting object of a new form of work called reporting (Mindich, 1998; Schudson, 1978).

Unlike scientific facts, which are typically arrived at through deduction or a rigorous process of induction, reporting often involves determining facts through a more casual, ad hoc induction process, in which claims are generalized based on the observation of only a handful of instances, which can make them difficult to verify or

accept as valid knowledge (Merrill & Odell, 1983; Romano, 1986). This inductive process makes the source of those facts crucial to maintaining their reliability and authority. This makes bureaucratically produced, pre-validated facts especially useful to journalists, in addition to their amenability to journalists' tight time constraints, they can be taken as incontrovertible, authoritative fact with minimal risk to the journalist's credibility (Fishman, 1980). But for all the importance of the fact within the modern news paradigm, journalists have spent very little time examining the role and meaning of the fact itself and have directed far more attention to the methods by which facts are obtained and verified. It is to these methods we turn next, starting with the form of evidence reporters gather.

Evidence

Despite journalism's roots in realism, journalistic truth is the product of a process of dealing not with reality itself but with a set of evidence that can ostensibly be taken for that reality (Ettema & Glasser, 1998). Evidence plays an important role in establishing knowledge in general, forming the crucial link between belief and justification. And at first glance, evidence would seem to be even more central to journalism, with its focus on a particular method — reporting — designed to produce reliable and authoritative public knowledge, as opposed to the content or subject of the knowledge itself. But journalists often avoid the process of fully gathering and presenting the kind of direct and rigorous empirical evidence needed to support their factual claims by simply letting official statements and accounts stand in for that evidence. They do this largely because neither they nor their readers have the time to fully evaluate the truth of the accounts they are giving, so they merely assert their claims rather than laying out the evidence for them in the form of an argument (Broersma, 2010; Pauly, 1990). Still, reporters rely on a complex hierarchy of evidential validity when determining which pieces to consider and how that evidence might congeal into facts. Many of the highest forms of evidence in that hierarchy are bureaucratically produced without any investigation or substantiation on the

reporter's part. But regardless of how they are gathered, they are all entered into the journalist's calculation — either formal and systematic or, far more often, hasty and instinctive — of how to constitute and organize the facts she will present to the public (Ettema & Glasser, 1998; Fishman, 1980).

Three forms of evidence serve as the elemental materials of journalistic newsgathering: Observation, interviews, and documents, what Anderson (2010) calls the "holy trinity of news objects." Anderson characterizes them as objects to highlight both their social and material attributes. These objects function as the material basis for journalists' factual claims; their materiality is an important part of their evidentiary value to journalists because it fits well with the empiricist orientation of their realism, giving them tangible ways to experience and justify accounts of reality. Those material qualities are also constituted with objects' social qualities, as each object of evidence also carries its own history, symbolic characteristics, and ways of being assembled alongside other objects into newswork and news accounts. Each object each plays a different and complementary role in establishing the factuality of news reports, and together, they form the raw epistemological material that constitute news facts and thus journalism's public knowledge.

Observation

Observation is often positioned at the top of journalists' hierarchy of evidence as "the height of reliable news" (Kovach & Rosenstiel, 2010, p. 77; Jones, 2009). Physical presence and proximity, mediated through observation and description, has historically been at the core of the type of "original reporting" practices that journalists defend as the essence of their work and basis for their expertise (Coddington, 2014a). Among journalism scholars, observation is so closely associated with reporting work that it has been referred to "shoe-leather reporting" itself (Mawindi Mabweazara, 2013; Pavlik, 2000). This veneration is largely because of the special resonance of physical, bodily presence and proximity as sources of journalistic authority and authenticity, as

journalists' credibility as reliable firsthand witnesses and the use of their bodies to sense and gather information undergird the legitimacy of their reports and reporting as a professional practice more broadly (Allan, 2012; Bock, 2012b; Zelizer, 1990b, 2007). There are limitations to the authority that derives from observation, however. The authority of presence is particularly situational and contingent, dependent on the vagaries of access and the fallibility of memory and subjective interpretation (Allan, 2012, p. 340; Zelizer, 2007). For all the mythologizing of the intrepid eyewitness reporter in dangerous, far-flung locales, in practice, journalistic observation often takes place in contexts highly structured by source organizations, such as public meetings, trials, and press events (Ericson et al., 1987).

Journalists' authority through observation is also facing a severe challenge through the affordances of the democratizing, networked technologies of the web and mobile media. Just as eyewitnessing is becoming more central to journalistic credibility through the increasing centrality of live coverage, it is also becoming scarcer within professional journalism because of cuts to reporting jobs and increasingly widespread outside the profession (Zelizer, 2007). Thanks in part to the proliferation of camera phones and the distributed infrastructure of social network sites, virtually anyone can witness a news event, record a report, and distribute it to a public audience. There are no professional or journalistic barriers to such reporting — though institutional barriers to gaining a substantial audience remain — as the only real qualifications are proximity and immediacy (Andén-Papadopoulos, 2013; Zelizer, 2007). The same questions about credibility that dog professional journalistic eyewitnessing plague its non-professional counterpart to an even greater degree, but the unstaged quality and often emotional subjectivity are also a significant part of what give these latter reports their authenticity and authority (Andén-Papadopoulos, 2013; Chouliaraki, 2010). Professional journalists are thus quickly losing primary jurisdiction over what has been conceived of as the central evidence-gathering practice of their epistemological work.

Interviews

While observation is afforded the highest credibility and veneration, interviews are modern journalism's most common epistemological practice, its primary means of gathering the evidence needed to establish the factuality of its reports (Ericson et al., 1987; Schudson, 1994).[8] The journalistic interview was invented by Americans in the mid-1800s, a fact-centered newsgathering practice that developed as part of the emerging work of reporting (Chalaby, 1996; Schudson, 1994). Interviewing formed an important part of journalists' nascent professional identity, allowing them to publicly demonstrate both their intimacy with and autonomy from the field of politics while formalizing source relationships, a role it continues to play today (Broersma, 2007; Schudson, 1994). Beyond that public performance of cultural authority, interviews play a particularly important role as evidence establishing factuality because attribution of information to powerful sources — "someone said so" — is a primary grounds for factuality in journalistic reports (Ericson, 1998; Fishman, 1980). The essential factual product of the interview, then, is the quote, which gains authority as being the source's own words, apparently unmediated, while distancing the journalist from the information. Quotes provide a way to borrow authority from official sources to use in validating information, while distancing the journalist from the source's value-laden — and thus polluting — assertions (Bell, 1991; Ekström, 2001; Tuchman, 1978; Zelizer, 1989).

The challenge to the authority afforded to journalists through the interview is not as pointed as the threat to journalism's jurisdiction over observation, but it is present nonetheless. More public figures and official sources have found ways to speak directly to their desired audiences, circumventing interviews, press conferences, and other opportunities where journalists might be able to impose on them a question-and-answer format that is decidedly in the reporter's favor (Bruni, 2013; Ekström, 2001; Ingram, 2012a). In addition, the presence of many newsmakers in relatively unfiltered networked

[8] Interviews are not entirely disassociated from the embodied practice of observation; face-to-face interviews in particular involve elements of witnessing and observation, which helps explain why journalists have ascribed higher evidentiary value to them than to interviews by video, phone, or email.

environments such as Twitter has helped demystify interviews and source relationships for the public. Interviews remain a distinctly journalistic practice, but their role in the production of news as public knowledge is declining.

Documents

Documents have a particular resonance for journalists as a form of evidence, and more so than the interview or observation, that resonance is tied to documents' origins in bureaucratic structures of power. To the extent that documents are considered credible pieces of evidence by journalists, it is because they are bureaucratically produced, which makes them performative: They enact social reality rather than simply describing it. In the same way that a marriage license helps create the social fact of a marriage, official documents are to journalists not only records of reality, but in a way reality itself (Ettema & Glasser, 1998). Because of this, "[a]s long as it is a valid document, what it says is what has to be. Journalists love performative documents because these are the hardest facts they can get their hands on" (Fishman, 1980, p. 99). Lippmann (1922/1961) recognized something very similar when he remarked that "there is a very direct relation between the certainty of news and the system of record" (p. 343). Still, documents are less consistently used as evidence in journalistic reports, in part because they require interpretive work that can range beyond journalists' expertise (Ericson, 1998; Ericson et al., 1987). Though they are rarely used in breaking news, documents play an especially important role in investigative journalism, and in the process of verifying information that has been gathered because of their materiality and official imprimatur (Ettema & Glasser, 1998; Hansen, Ward, Conners, & Neuzil, 1994; Shapiro, Brin, Bédard-Brûlé, & Mychajlowycz, 2013).

Documents have waxed and waned in importance over the past century; in the early 1900s, journalists moved away from documents as a form of evidence and toward interviews as interviews became easier to get and allowed journalists to exercise more interpretive autonomy and authority (Schudson, 1982, 1995). But document work has

grown significantly since the 1980s with the rise of computer-assisted reporting, which relies on official documents in database form as the primary grist for its claims to factuality (Ettema & Glasser, 1998), a shift that has coincided with the digitization of documents in bureaucratic work in forms such as databases and PDFs (Gitelman, 2014), even as it has muddied the definition of a document by pulling it away from its historical paper-based form. In addition, annotative journalism that consists of critical analysis of textual sources has grown with the development of blogging, though it deals with published sources rather than officially produced documents (Graves, 2015). But even as the reliance on official documents and digital data grows, journalists are also losing the exclusivity of their access to and expertise regarding this form of evidence. Data journalism, along with open government movements, has focused on opening access and interpretive power regarding official documents in the form of data to the public, given non-professionals more opportunity to examine and weigh many of the same document and data sources as professional journalists (Coddington, 2015; Parasie & Dagiral, 2013; Sifry, 2011). These shifts have simultaneously elevated documents' importance as a form of journalistic evidence and eroded journalists' claim to the exclusive expertise to access and understand them.

News Judgment

The guiding principle under which all of these forms of evidence are weighed, evaluated as facts, and organized into stories is news judgment, which is at once one of the most crucial elements in the production of journalistic knowledge and the most inscrutable as well. News judgment is characterized as "the sacred knowledge, the secret ability of the newsman which differentiates him from other people" but also as a sort of common-sense knowledge that is so simple that it cannot be explained (Tuchman, 1972, p. 672). This combination of exclusivity and commonness allows journalists to use news judgment to act as the custodians of common sense (Mander, 1987). They conceive of their knowledge as something that can only be developed through professional

experience and knowledge of the routines of newswork (Ericson et al., 1987; Schiller, 1979), but it is understandable and universal enough that it can be accessed within virtually every other realm of public life as well. Its opacity has led to varying characterizations by scholars; Tuchman (1978) describes it as a rather bureaucratic system of classifications by which work is controlled and order is imposed on an infinite number of occurrences, while Gans (1979) observes it as the manifestation of abstract, ideological values such as responsible capitalism, altruistic democracy, individualism, moderatism, and social order. In both conceptions, news judgment is the glue in the journalistic process of building knowledge. It binds together particular objects of evidence into facts and determines the shape those facts will take as they are constructed into knowledge for public consumption.

News judgment is esoteric and malleable enough to withstand many of the material factors that are threatening journalism's authority over its forms of evidence-gathering. Still, journalists have shown great concern that their news judgment is being eroded by the conditions in which online journalism is practiced. Numerous studies of online journalism have depicted it as a practice whose overwhelming speed makes it difficult for journalists to exercise more than the most elementary judgment in their decisions about what news to produce and how (Boyer, 2010; Phillips, 2010; Usher, 2014; Vobič, 2015; Vobič & Milojević, 2014). In addition, journalism's preoccupation with tailoring content to the preferences of their audiences as measured through online metrics has often risen to the point where it is the "primary ingredient" in news judgment (Anderson, 2011a, p. 561; Boczkowski, 2010; Boyer, 2013; Usher, 2012). This has raised concerns among both journalists and scholars that news judgment is being usurped by a thin, capricious vision among journalists of the desires of a mass audience, taking news judgment out of the realm of an individually held, professionally based knowledge (Anderson, 2011b; Lee, Lewis, & Powers, 2014; Usher, 2012). In some cases, journalists have responded by rallying around news judgment as a core element of their work, one

they will not cede to their audiences (Karlsson & Clerwall, 2013; Peters, 2010; Singer, 2011).

Verification

As all of these pieces of evidence are gathered, journalists weigh them alongside each other, using news judgment to evaluate their facticity and determine whether they congeal into valid, presentable facts. This process is verification, a practice that is inextricably looped into the reporting process of evidence-gathering itself (Shapiro et al., 2013). Like each of the individual elements of this process, verification as a whole has also been cited as the core practice of journalism, most famously by Kovach and Rosenstiel (2007), who declared that "[t]he essence of journalism is a discipline of verification" (p. 79), a sentiment shared by many professional journalists (Shapiro et al., 2013). Likewise, Hermida (2012, 2015) describes verification as a central element of journalists' professional identity, a practice that allows journalists to claim the authority to parse reality, determining what representations of it are suitable for public consumption. It is thus a strategic ritual, just as objectivity is (Shapiro et al., 2013), but also a fundamentally epistemological one, with the question of "How do people know what they claim to know?" at its core (Hermida, 2015; Silverman, 2014).

But just as with the evidence-gathering practices on which it is based, there is a gap between the professional purposes verification serves and its actual practice within professional journalism itself. Many facts asserted in journalism go unverified, because the journalist lacks the time, resources, or temerity to challenge official accounts and instead takes bureaucratically produced information at face value (Ericson et al., 1987; Fishman, 1980; Tuchman, 1978). As a result, journalism's verification method "is a non-systematic hodgepodge of common sense, scepticism, and informal rules that newsrooms follow with varying consistency" (Ward, 2004, p. 293). To the extent that verification has a coherent method, its key act is corroboration, using the tacit knowledge of news judgment to determine how the facts and evidence from various accounts fit together

(Ettema & Glasser, 1998). Certain facts require more corroboration than others: The more powerful the subject of the fact, and the more damaging the factual assertion, the more corroboration journalists require (Ericson, 1998; Ericson et al., 1987; Hermida, 2015; Shapiro et al., 2013). Verification has maintained its importance for professional journalists in online contexts, as journalists have developed distinct variations on the verification process aimed at determining the veracity of online information, thus allowing them to make some of the massive amounts of information streaming through social network sites and elsewhere online professionally useful (Bruno, 2011; Creech, 2014; Hermida, 2015). Still, verification has also faced substantial challenges posed by that same relentless stream of online information, which will be examined further in the following section.

The epistemological work of modern American journalism, then, consists of using reporting methods that are professionally validated but not systematically or rigorously applied to develop accounts of events and situations that can be accepted by audiences as authoritatively true representations of reality. These methods begin with gathering *evidence* in three primary forms — *observation*, *interviews*, and *documents* — then, as that evidence is weighed through a *verification* process built on corroboration and *news judgment*, journalists determine how that evidence creates particular news *facts* and justifies presenting those facts as incontrovertibly true statements about reality. The journalist's sense of narrative, which will be addressed in the next chapter, suffuses each stage of this process as well, pointing the journalist toward certain forms of evidence, helping her see some facts but not others, and developing the frame through which those facts are arranged into news stories. This process as a whole is the work of *reporting*, a thoroughly professionalized practice that is, at bottom, an epistemological task of knowledge production.

This epistemological paradigm and process remain the dominant ones of professional journalism, yet, just like the high modern era of ideally rationalized journalism in which they reached their fullest expression (Hallin, 1992b), their time as the default, unquestioned mode of journalistic practice has passed. Several forces have combined to challenge their validity and legitimacy, leaving cracks in professional journalism's epistemological foundation and uncertainty about the shape of its practices and extent of its social authority. Four of these challenges have posed a particular threat to this journalistic mode of practice.

Post-Realism

First and most broadly, the realist philosophy on which the professional journalistic epistemology is based has fallen out of favor among academics, the public, and, to an increasing degree, journalists themselves. The academic assault on realism was the first and most severe of these. As I have discussed earlier, social constructionism's idea that reality is socially constructed rather than externally existent independent of social relations has given rise to skepticism that pervades the study of virtually every account of reality, whether scientific positivism, history, literary analysis, or journalism (Berger & Luckmann, 1966; Lock & Strong, 2010). Within journalism studies, numerous sociological scholars of the 1970s and 1980s shattered the idea that the news could act as a mirror of the world, illuminating the ways in which journalists constructed news according to ideological values and routinized constraints rather than reflecting society in a realist way (e.g., Ericson et al., 1987; Fishman, 1980; Gans, 1979; Hall et al., 1978; Molotch & Lester, 1974; Tuchman, 1978). These studies became the foundation of much of the research that examines news production even today (Cottle, 2000; Shoemaker & Reese, 2014; Zelizer, 2004).

This skepticism — of ways of knowing reality in general and journalistic accounts in particular — has spread to the public as well. Contemporary Western society is in the

midst of what Dahlgren (2009) calls a "multi-epistemic order" (p. 158) in which the notion that truth is prismatic and that all perspectives are contingent and partial is dominant. In place of a vision of truth as correspondence to an reality that exists outside of ourselves, the self has emerged as the ultimate arbiter of truth, with reality measured in terms of one's own subjective experience and personal judgment (van Zoonen, 2012). As a result, the public's belief that anyone, much less the particular group of people known as professional journalists, can give an objective, definitive account of reality has withered (Kovach & Rosenstiel, 2007), as facts become simply perspectives that can change or assertions that can be ignored if they do not fit within one's cognitive or ideological framework (Manjoo, 2009; Robinson & DeShano, 2011). Journalists have adjusted to this skepticism of their accounts by backing off the definitiveness of their claims and shifting from objectivity to transparency as a dominant norm (Agarwal & Barthel, 2015; Chadha & Koliska, 2015). They have similarly shifted toward interpretive journalism by producing more "explainers" and analyses of news events and doing more to interpret the "why" and "how" behind news events, rather than simply the more basic "who" and "what" (Barnhurst & Mutz, 1997; Doctor, 2014). In producing this type of journalism, they move toward abandoning a belief that the facts are capable of speaking for themselves and doing more to subjectively interpret them in an attempt to maintain their social authority amid the public's distrust of their basic epistemological methods and claims (Barnhurst & Mutz, 1997; Jacobs & Townsley, 2011).

Hypertextuality

Second, the structure of the web, where most news is now consumed, is built on hyperlinks, which allow a variety of truth claims to be inconclusively presented alongside each other and thus break what had traditionally been a cohesive and authoritative account into disjointed and often conflicting fragments (Ryan, 2001). Hypertextuality shifts the site of knowledge construction from the journalist alone to a shared space between the journalist and user (Matheson, 2004). Ryan (2001) compares the

hypertextual story to a supermarket, in which readers are encouraged to browse through claims and sources, putting whichever ones they prefer into their "basket" to combine into their own individual understanding of reality. This structure undermines journalists' attempts to present an ordered and definitively determined presentation of the reality of an event or issue.

Several scholars have examined this characteristic as it relates to blogs, which use links, a prominent personal voice, and open discussion with readers to present a broad range of possible truths by letting readers actively explore and construct truths for themselves (Matheson, 2004; Munn, 2012; Robinson, 2006; Singer, 2007). On many of these blogs and other hypertextual accounts, links simply pile up without synthesis or verification, with a story expected to emerge through the accumulation of accounts and perspectives rather than any validated or rigorous epistemological method. Knowledge, in this way, is generated in the process of making connections between accounts and perspectives, rather than something that can be contained within a single text (Matheson, 2004; Robinson, 2006). Likewise, in this model, the journalist's epistemic authority is based not on the ability to present a definitive factual account in a single text, but to locate a comprehensive variety of accounts, each of whose claims to facticity are contingent and diluted, then aggregate them and position them together (Matheson, 2004).

Uncertainty of Online Information

Third, the speed, volume, and decentralized nature of information online pose a significant challenge to the efficacy of journalism's reporting and verification methods of validating that information and judging its reliability. Journalists have long seen the online information environment as a threat to their ability to verify the factuality and accuracy of information, and those concerns have not abated in recent years, particularly with the rise of social media and user-generated content (Fortunati et al., 2009; Hermida, 2012; O'Sullivan & Heinonen, 2008; Pantti & Sirén, 2015; Singer, 2003). The difficulties

the online environment presents for journalistic verification are manifold, starting most generally with the fact that the prevalence of anonymity and pseudonymity make it more difficult to discern the origin and sources of online information (Silverman, 2014). In addition, the vast amount of information online can make it more difficult to determine any definitive truth, particularly when so many of those accounts contradict each other (Kovach & Rosenstiel, 2007). The distributed nature of online networks makes information's veracity especially difficult to determine, as information passes back and forth across the network without traveling through any central hub that can authenticate, filter, or vouch for it (Newhagen & Levy, 1998). That difficulty has only intensified with the increased centrality of social media in online information gathering, with the increasingly dense connections among the network making it easier for information to travel widely without passing through a professional gatekeeper.

Journalists have highlighted the speed of the online environment as an obstacle to verification in two related senses: The speed with which information travels online — particularly on social media — and the relentless pace at which journalists are expected to work and publish online. The first is largely a product of the dense and distributed nature of online social networks as well as the immediacy built into the architecture and culture of the web (Usher, 2014). The second is a product of the work conditions that have been normalized in online journalism as a result of newsroom cuts, precarious labor, and both journalism and the web's cultures of immediacy (Boyer, 2013; Örnebring, 2010; Usher, 2014). The result is an emphasis on publishing quickly at the expense of verification, often accompanied by a norm of publishing first, especially if it's already "out there," and correcting later (Deuze & Yeshua, 2001; Kovach & Rosenstiel, 2007; Phillips, 2010; Vobič & Milojević, 2014). Verification thus shifts from something that happens across sources at a particular point in time to a process that extends iteratively over time, even after publication. Social media also offers journalists the opportunity to expand their epistemological process by accessing the accounts and perspectives of

people they wouldn't otherwise take into account and by allowing the work of verification to be opened up to take advantage of the distributed expertise of the network (Creech, 2014; Hermida, 2012). Such processes, however, are still subordinated to journalistic authority and the exclusive epistemological practices of professional reporting (Creech, 2014; Shapiro et al., 2013).

Public Access to Evidence

Fourth, journalists' exclusive access to and authority over its core objects of evidence are waning. As I argued above, the public is gaining greater ability to gather many of the same pieces of evidence as professional journalists, weakening journalism's jurisdiction over not only gathering that evidence, but also weighing it and developing it into facts and accounts. The ability to observe and document news events for an audience is available to anyone with a smartphone; the information once accessed only through interviews is now often available to anyone with an Internet connection or social media account; and many the documents and data journalists have relied on are available to anyone with a PDF reader or Excel. The amount of evidence available to journalists has exploded thanks to the proliferation of information online — there are more images, data, eyewitness accounts, and written accounts for journalists to gather and evaluate than ever before. But this boom in evidence also destabilizes the process by which journalists make sense of that evidence. With so many more objects to consider, journalists are forced to reconsider what constitutes valid evidence, throwing their long held epistemological methods into flux (Anderson, 2013b). And because so much of this evidence is easily accessible to anyone, journalists have lost any monopoly they might once have been able to claim over the ability to parse it. This destabilization of journalism's epistemological practices leaves an opportunity for other paradigms and methods to make inroads into professional journalism; that is where aggregation steps in.

News aggregation occupies a liminal position regarding each of these epistemological shifts, fittingly for a practice derived from both the information-gathering processes of professional journalism and the networked structure of the web. Aggregation's position regarding the realism of modern professional journalism is ambiguous; its attempt to strip out narrative devices for understanding and contextualizing facts — which will be examined more closely in the following chapter — suggests a belief that the facts are capable of standing on their own as self-evident pieces of reality. On the other hand, their lackluster hodgepodge of methods of verifying and gathering evidence for those facts belies a lack of concern for the validity of facts, suggesting a pragmatist or constructivist epistemology that is more concerned with whether its information will resonate with its audience than whether it bears a close correspondence with an objective reality.

The hypertextual structure of online communication is deeply embedded into aggregation, which is inherently reliant on the hyperlink to both access and attribute information. Likewise, many forms of aggregation emerged from the link-and-comment form of blogging (Rosenberg, 2009) and the practice remains built largely on the open epistemology of blogging, using hyperlinks to present a variety of claims while eliding authoritative statements as to which of those claims represents a truthful account. This orientation pushes aggregation toward a more user-centered, constructivist epistemological mode, in which, as in Ryan's (2001) supermarket analogy, the user chooses which accounts to ignore and which to acknowledge in creating her own "recipe" of truth. Aggregation, in this way, represents a sort of "choose your adventure" epistemology in which the aggregator creates an account intended to allow each user to assemble its parts into a different vision of reality, rather than intending to produce a unitary, authoritative account of reality as journalism traditionally has.

More than virtually any other form of newswork, aggregation embodies the struggle that journalism faces with discerning the certainty of claims amid the increasing

volume of online information and speed of publishing. Speed has been repeatedly described as a defining quality of aggregation work, a primary factor that limits aggregators' ability to gather and verify the type of evidence that journalists typically use to justify the veracity of their stories. Researchers, and aggregators themselves, have described their work as factory-like, manic, or "pack[ing] news like sausages" (Vobič, 2015, p. 10), an environment hardly conducive to coherent epistemological methods, traditional or otherwise (Boczkowski, 2010; Phillips, 2010; Quandt, 2008; Vobič & Milojević, 2014). In addition, aggregation work, like other forms of online journalism, tends to rely heavily on the audience's perceived desires in the form of online metrics in decisions about what constitutes news and how it should be covered (Anderson, 2013a; Boyer, 2013). These metrics-based audience perceptions form a potentially important constraint on aggregators' news judgment as it is applied to determining and presenting news events and facts. Each of these factors appears to point toward entropy in aggregation's epistemological processes, as a practice that begins as a direct derivative of reporting may end up devolving into a scramble to publish information that will attract the largest audience as quickly as possible, rather than what has been systematically verified as factual.

Finally, while journalism's objects of evidence are open to a far broader range of participants, aggregators cannot claim an exclusive or firsthand relationship to that evidence as reporters can. They have no direct observation of their own on which they can rely; all of their eyewitness information is mediated by published accounts. They generally do not interview sources, except in some rare cases. And while they can make use of documents, those are often obtained secondhand, in which case the work of accessing and interpreting them is not their own. What, then, is the basis for the facts they assert? Their evidence is published reports, often by professional news organizations, and the validity aggregators can place on those reports as forms of evidence is derived in large part from the reporting work of others that has gone into producing them and

verifying their information. Viewed this way, aggregation is simply secondhand newswork, borrowing the epistemological certitude that is ultimately generated by the reporting process. Still, aggregation cannot be dismissed so simply; it still consists of an epistemological process, a system designed to determine the validity of information and communicate it as knowledge. Anderson (2013c), for example, posits that aggregators have accepted alternative objects of evidence — the website and the hyperlink — as valid parts of their news networks. Similarly, there is still some sort of criteria at work in aggregation to sort through the credibility and weight of the various forms of evidence, even if the evidence is indirect and the criteria haphazard.

CONCLUSION AND RESEARCH QUESTIONS

This chapter examined the roots of the key epistemological tension in aggregation work — its adoption of journalism's realist epistemology without the direct access to the primary objects of evidence on which it is based. I addressed this by first exploring the primarily realist paradigm behind modern journalism and the reporting methods used to construct factual accounts and produce knowledge for the public within that paradigm. I also laid out the numerous challenges that face this model of journalism in a post-realist environment driven by networked information technologies: Skepticism of journalists' ability to determine an authoritative depiction of reality through reporting, a shift toward selective and participatory determination of truth through hypertext, uncertainty regarding the veracity of information in a networked and fast-moving information context, and widespread access to journalism's primary objects of evidence. Aggregation, with its lack of access to firsthand journalistic evidence and emphasis on speed and audience preference to the detriment of professionally validated epistemological method, is particularly susceptible to several of these challenges. As we will see further in the following chapter, many forms of aggregation seek to present a granular, largely de-narrativized account that reduces news accounts to "just the facts" — the traditional core of modern journalistic accounts — but its standards for identifying and verifying those

facts are significantly lower than those of reporting work. On the other hand, aggregation holds the potential of exercising a more open epistemological approach that allows a public that has rejected traditional journalism's attempts to present a definitive account of reality to play a more active role in selecting and evaluating accounts as they determine their own subjective perspective of reality.

Yet for all its potential power to either transform or erode traditional journalistic methods, the nature of aggregation's actual epistemological paradigm and methods remain unclear. Specifically, are aggregators developing their own epistemological standards and processes of knowledge production, or simply a bastardized, enervated version of the traditional epistemological form? It is not known, for example, to what degree aggregators' standards for evaluating evidence are drawn from those of traditional journalism, or the extent to which aggregators view their goal as presenting an account that corresponds to reality, as opposed to presenting a multiplicity of possible truths. In addition, previous research has not determined what factors might account for variance among aggregators in these epistemological values and procedures. Given the growing prevalence of aggregation as a mode of journalistic practice, the examination of these epistemological issues in relation to aggregation has the potential to shed light on the direction of journalism as a knowledge-producing practice as a whole.

This leads me to pose the following research questions:

RQ4: What are the differences between aggregation and traditional reporting in terms of what is reliable and how things are known?

RQ4a: What are the processes by which aggregators determine these things?

RQ5: How do aggregators understand and weigh forms of evidence?

RQ5a: What forms of evidence do they use, and how do those forms compare with the forms used by traditional reporting?

RQ5b: How do they present this evidence and justify its veracity to their audience?

RQ6: What are the values and influences that underlie aggregators' news judgment?

RQ6a: How do they manifest themselves in the news production process?

RQ7: What role does verification play in aggregators' work?

RQ7a: What are their routines of verification?

Chapter 4: Narrative, Journalism, and the Granulation of News

This study aims to characterize the distinctions of aggregation from other forms of contemporary professional journalism, and aggregation differs from those modes in two primary aspects: Practice and form. The previous chapter addressed aggregation's divergence from traditional journalistic *practice* in epistemological terms, exploring reporting as an epistemological practice of constructing factual accounts intended to authoritatively represent reality by gathering, sifting, and arranging various types of evidence into "verified" facts. By contrast, aggregation, without direct access to reporting's objects of evidence, constitutes an uncertain method of knowledge production characterized by speed and hypertextual audience participation. In this chapter, I will examine aggregation's divergence from traditional professional journalism in terms of *form*, through its rejection of the narrative-based modern news form as a means of presenting, organizing, and understanding news facts and accounts.

Journalistic form and practice complement and influence each other; the practices by which information is gathered helps determine the information that is available to be presented in a particular form, and conversely, the form in which journalists work helps shape the ways they gather information, such as when the visual form of TV news influences the way TV journalists conduct interviews relative to their off-camera counterparts. Likewise, the practices of gathering evidence and the form of news accounts function together to construct news accounts, as narrative forms help journalists identify the appropriate facts to gather and how to gather them (Ettema & Glasser, 1998). This chapter expands on the last to explain the epistemological functions of narrative form in journalism and the development of shorter, more granular forms of news such as aggregation.

In this area, too, aggregation exhibits one of the contradictions outlined in this study's introduction. Even as it diverges from modern journalism's narrative forms, it still rests on the broader narrative realms of journalism — notably, the broader levels of

story arc and myth, which extend beyond individual texts — to make sense of news and present it to audiences. Narrative is a broad term referring to the attachment of relationships and meanings to sets of events separated in time, and I will outline in this chapter a three-part distinction of narrative into macro, meso, and micro levels. In all three forms, it has served a central role in framing reality throughout journalism's history and particularly in its modern American incarnation. But aggregation is one of a set of practices that seek to strip out narrative as a sense-making device, replacing the story with a new "atomic unit" of news that is smaller, more granular, and centered on discrete pieces of information thought of as facts. In their conscious move away from narrative as an organizing principle — at least the individual story forms around which modern journalism has been built — aggregators appear to open up the possibility of a new epistemological model that recasts the narratives journalists use to present information and, by extension, the facts they construct and make sense of through those narratives (Ettema & Glasser, 1998). I will examine narrative's role in news and aggregation's development of narrative in three general sections: first, by broadly characterizing the functions narrative serves in news; then by outlining a three-part conceptualization of news narrative at the macro, meso, and micro levels; and finally by exploring journalism's bifurcation into longer and granular forms.

NARRATIVE'S ROLE IN NEWS

The term *narrative* is used broadly enough across literary theory, history, and communication that some slippage in its definition is inevitable; I hope to clarify some of that news-related slippage later in this chapter. Still, scholars of narrative theory have typically ascribed to narrative several general attributes: It is an account of multiple events, separated in time, with some relationship — typically causal, though the audience has a tendency to infer causality where it is not explicitly included — between the events encouraging the attachment of a particular meaning to them (Chatman, 1990; Entman, 2010; Kozloff, 1992; Matheson, 2010; Ricoeur, 1984/1990). The focus on events over

time distinguishes narrative from *description*, which centers on states of being rather than action (Chatman, 1990), and its emphasis on putting events into meaningful relationship with each other distinguishes it from *chronicle*, which simply lists facts or events in sequence (Mink, 1978; Schudson, 2011; White, 1987).

Narrative, or storytelling, has been posited as the fundamental logic of human communication, the basic universal human means of giving meaning and order to experience and reality (Fisher, 1984; White, 1980). This "narrative paradigm" may overstate the centrality of narrative in structuring human thought and experience, but narrative is indeed intrinsically connected to meaning-making, a way to bring order to events and human experience by relying on our fundamental drive to attempt to connect events to each other in order to explain why they happened (Barkin, 1984; Manoff, 1986; Roeh & Ashley, 1986). Beyond this, narratives are formed and communicated through shared codes of cultural meaning, which allow their meanings to be interpreted within a collective moral order that provides justification for shared ideologies and beliefs (Bennett & Edelman, 1985; Mink, 1981; Zelizer, 1993). Narrative thus provides a way of seeing the world both cognitively and morally, uniting those two realms through its culturally coded form of sense-making (Ettema & Glasser, 1998).

News Narrative's Authoritative Functions

News narrative accomplishes those same functions in particular ways: Robinson (2009) describes news as a story form that organizes human experience especially with regard to time — by chronicling its passage through its relentlessly temporal nature — and place, with its orientation around particular geographical communities. Similarly, in its insistence on finding patterns among events and meaning among those patterns, news narrative invites its audiences to see unity among disparate events where it might not exist (Manoff, 1986) and, more specifically, it helps them keep uncertainty at bay by giving them "cogent actors, closure, and an overall sense that events are inherently comprehensible" (Schulman, 1990, p. 15). News narrative also personalizes abstract

events, putting them in an affective dimension and inviting audiences to connect them with their own experiences (Barkin, 1984; Broersma, 2010; Schudson, 1978).

This does more than simply provide a collective orientation for people to understand reality; it does so in a way that reinforces dominant ideologies and further marginalizes messages that might challenge those ideologies. The conventions of news narrative reinforce those ideologies by giving a means to interpret the world in a commonsensical way, which naturalizes certain understandings of how the world functions and gives audiences a sense of what phenomena to attend to and how (Campbell, 1991; Schudson, 1982). Schudson (1982) makes this point aptly in his discussion of the conventions of news form:

> Conventions help make messages readable. They do so in ways that "fit" the social world of readers and writers, for the conventions of one society or time are not those of another. … [T]hese conventions help make culturally consonant messages readable and culturally dissonant messages unsayable. Their function is less to increase or decrease the truth value of the messages they convey than to shape and narrow the range of what kinds of truths can be told. (p. 98-99)

More explicitly, narrative also gives lessons to be drawn and guidelines for behavior through its stories, both building on and reinforcing consensus and social order. The continuity in both the form and themes of news narrative forecloses any opportunity for an alternative vision of social order to emerge (Barkin, 1984; Bird & Dardenne, 1988; Hall et al., 1978; Mander, 1987).

For journalists, the work that their news narratives do to reinforce social order also serves a self-justifying purpose. Narrative is a tool of journalistic legitimation, a stamp that journalists can use to imprint their own versions of events as authentic and authoritative. To the degree that narratives are taken as naturalized accounts of the world, journalists can position themselves as the experts who are capable of understanding and communicating reality in this definitive way (Bennett & Edelman, 1985; Zelizer, 1990a).

What is it about a narrative that provides this authority? Beyond the authority of communicating "the facts" themselves, narratives lay out a definitive way of fitting those facts together to produce a coherent view of reality. When we read a narrative account and give it credence, we attribute to the author not only the authority of determining the facts in that narrative, but also of finding the meaning in those facts by applying a credible narrative frame. Journalists augment this inherently legitimating form of narrative with particular conventions, seeking to boost their own authority by limiting audiences' interpretive latitude through declarative, denotative language that delimits outcomes and causes of events (Bock, 2012a; Schulman, 1990). Such a style is often meant to elevate the journalist as an objective arbiter of reality by obscuring her role in subjectively determining the account, though in TV news, authority is also established through the reporter's presence in the narrative (Bock, 2012a; Weaver, 1975).

News Narrative's Epistemological Functions

Narrative in general, and news narrative more specifically, offer a particular way of understanding the world, of relating facts and events to one another and forming them into a meaningful, authoritative account of how society functions. This is at heart an epistemological function, and an important one in understanding not only how news is consumed, but how it is produced as well. Narrative allows journalists to understand the world in particular ways just as it does for all of us, though for them it takes on additional importance because their work centers on not simply understanding the world, but communicating it in particular narrative ways as well. For journalists, narrative offers a way to make sense of events and tell the newsworthy from the non-newsworthy. These events "cannot be allowed to remain in the limbo of the 'random'—they must be brought within the horizon of the 'meaningful'" (Hall et al., 1978, p. 54). The narrative frame into which journalists fit most news stories is simply that of facticity, as facts become a story's plot, sources become its characters, and all other elements of the situation are mapped onto the 5 W's (Manoff & Schudson, 1986; Robinson, 2009). This fact-based

narrative framework tends to isolate events and limit the degree to which they can be related to one another causally or teleologically by casting them as self-contained narratives (Park, 1940). But it also helps ensure that news is perceived as reality, and the stories themselves "exploit the privileged relationship they are assumed to share with reality" (Manoff, 1986, p. 225), depending on the reader's assumption that the narratives they present organically formed from the facts of the situation and are the only story that could be told from those facts (Bennett & Edelman, 1985; Mander, 1987; Manoff, 1986).

Journalists may not actually believe that there is only one story that can told from the facts of a given situation, but they do tend to operate on the belief that at bottom of the events and situations on which they report, there is a true story that exists somewhere and that could be told properly if not for biases and professional shortcomings (Roeh, 1989, p. 163-164). This is essentially realist epistemology applied to narrative—the notion that a true story exists external to anyone's ability to tell it, and that truth in narrative journalism lies in capturing or unearthing as much of that independently existent story as possible. This type of attitude toward stories can be glimpsed when journalists talk about "getting the story," or even more tellingly, about failing to "get the story." This realist view of narrative assumes that stories are to a significant degree inevitable products of events, which is not the case; events do not dictate narrative form, and narratives are by definition selective representations of reality which help construct events just as events help construct stories (Bennett & Edelman, 1985; Manoff, 1986, p. 228). Likewise, facts and narrative are mutually constitutive; while facts are the pieces out of which narratives are built, narratives are also the means by which facts are realized and understood as facts (Ettema & Glasser, 1988, 1998; White, 1987).

News narratives are themselves the products not just of the events and facts that are often taken to be their raw material, but of journalists' routines, conventions of form, and ideological values (Manoff, 1986). Journalistic narratives — along with historical narratives — are distinctive among narrative genres in their commitment to a

representation to reality, but this does not mean they can actually claim such a direct representation. On the contrary, journalistic accounts are often just as narrative as fictional narrative, even if they have external referents those fictional narratives lack (Frus, 1994; Roeh, 1989). This does not mean that journalistic stories have no relationship to social reality, only that they relate to that reality the same way other stories do—by imposing meaning, order, and closure where none actually exists (Roeh & Ashley, 1986, p. 135; Tenenboim Weinblatt, 2008).

News narratives' devotion to faithfully representing reality does, however, lead to some distinctions from fictional stories; namely, they are constrained in the range of stories they can tell and how they can tell them. In practice, journalists' responsibility to a verifiable rendering of events within their narrative limits the types of characters they can use, the role they can play as narrators, and the plots they can construct (Chouliaraki, 2010; Schudson, 2011). Though journalists are capable of construing events to fit a narrative or manufacturing them entirely, they are still bound by their professional norms and identity to include in their narratives only events they perceive as externally occurring within their narratives. "No matter how much journalists expect to see a certain theme in the news they cannot continue to cover it without a steady supply of fresh incidents to report as instances of a theme," writes Mark Fishman (1980, p. 8). While the events around which journalistic narratives are organized must be verifiable, the narrative frames themselves are often unverifiable, ideological features of those events, a characteristic that offers significant leeway to journalists in constructing news narratives (Bennett & Edelman, 1985). Even with this epistemological flexibility, journalistic narratives face an additional burden and tension in the continual realization that the events they depict "are not contained within the telling, but have an empirical existence" (Matheson, 2010, p. 42). News narrative thus structures the way journalists themselves perceive reality before they even begin to present their account of that reality to the

public, but it is nonetheless bound in a complex, mutually constitutive relationship to externally occurring events.

Is News Narrative?

Though news narrative serves these wide-ranging social and epistemological purposes, there is considerable debate among scholars over the degree to which news discourse can be considered narrative. Numerous scholars have argued that the news itself is a form of narrative, characterizing journalists as storytellers whose primary work is to create "essentially melodramatic accounts of current events" (Weaver, 1975, p. 83), translating them from the realm of social occurrences into the realm of shared narrative meanings (Bell, 1991; Lule, 2001; Mander, 1987; Patterson, 1997; Roeh & Ashley, 1986). Barnhurst (2014) argues that news stories share the mechanics of narrative more deeply, describing them as "a narrative performance in which reporters present a plot complete with rising action, climax, and resolution" (p. 692). Put simply, the application of narrative is how mere facts are transformed into news.

Other scholars have countered that news is not a narrative, arguing that most news texts do not have the elements of narrative described by Barnhurst (2014), but are instead closer to a series of propositions. Rather than being structured around the organizing principle of dramatic tension or aesthetic enjoyment, many news stories lay out their major assertions in their headlines and leads and then unfold with a series of propositions designed to support and expand on those central assertions, a structure that may seem more akin to an argument than a narrative proper (Matheson, 2010; Thomson, White, & Kitley, 2008; van Dijk, 1985, 1988). Hartsock (2000) argues that such a structure is meant to close off inquiry from the audience, where narrative draws in the reader by inviting questions. It is true that the classic inverted pyramid news article does not conform to the conventions of narrative, and that many brief, routine news items are not produced or read as unfolding narratives (Bird & Dardenne, 1988). But that does not mean they are not narratives at some level. All news forms are narrative, but some are

more narrative-like than others (Schudson, 2011). Some news texts may not be stories in themselves, but they are part of broader narrative forms (which will be outlined later in this chapter) that extend beyond individual texts. We must be careful not to overstate the degree to which narrative is an organizing principle for certain news texts, particularly the most rudimentary and routine. This is an especially important consideration when examining aggregation, whose form in many cases pushes against any narrative construct, sometimes consciously so. Our conclusion regarding whether particular news forms (including aggregation) are narrative may ultimately come down to our definition of narrative; if narrative is defined more narrowly as a form with dramatic structure, characters, plot, and resolution, then most news and almost all aggregation will fall short of these standards (Ekström, 2000). But if narrative is defined more broadly as an attempt to make meaning of a causally related sequence of events, then virtually all news will contain narrative elements, though some of them may be quite faint.

Journalists are similarly conflicted regarding whether to view their own work as narrative. Journalists have often resisted the idea that what they are doing is primarily telling stories, insisting instead that their job is fundamentally to find, verify, and help their audiences understand facts. They show more awareness, that is, of the truth claims they are making than the stories they are telling (Roeh, 1989; Schudson, 2011). Campbell (1991) and Ericson and colleagues (1987) found this attitude to be more prevalent among print reporters than their TV counterparts, who are more open about their role as storytellers. But there are clear limits to this resistance to news as narrative. "Story" is an important catch-all professional term for journalists, one they use to refer to things like brief factual accounts and broader issues that aren't narrative or storylike in any strict sense of the word (Dunn, 2005; Rosen, 2014; Ytreberg, 2001). And the self-identity among journalists as storytellers has been ascendant in recent years, owing in part to increased competition for audience attention (Ekström, 2000) and the proliferation of storytelling forms online such as multimedia, data visualization, and collaborative stories

via social media (Cueva Chacón, 2010; Fink & Anderson, 2015; Papacharissi, 2015; Segel & Heer, 2010). All of this adds up to a fraught and complex relationship between news and narrative, one befitting a profession that uses narrative vision to help it construct the facts around which its discourse is centered.

NARRATIVE AT THE MACRO, MESO, AND MICRO LEVELS

While scholars have done much to illuminate the relationship between news and narrative, they have also tended to use the term rather loosely across studies, allowing varied concepts to be used within the same term of "narrative." Studies built around the concept of narrative have used the word to refer to anything from ideological mythical themes (e.g., Lule, 2001) to particular textual devices that include ordered events and a plot with a resolution (e.g., Ekström, 2000; Matheson, 2010). In order to bring some clarity to the term as it relates to news, I posit the division of narrative into three levels within the news production process. We can think of these three levels as the macro or "myth" level, which deals with overarching archetypal mythical themes; the meso or "story arc" level, which encompasses the narrative templates by which journalists view news as particular kinds of stories; and the micro or "story form" level, which involves the narrative forms and conventions of individual news texts. The three levels are deeply connected, and most news stories function at all three. This classification is intended to bring some conceptual clarity to this study's treatment of narrative in news and, most specifically, to structure the findings of narrative elements in aggregation in Chapter 7.

Macro (Myth) Level

At the broadest level, journalists see the world and the news events they perceive within it in the same narrative terms as everyone else — as part of a general framework that forms the canvas on which occurrences are painted and given their general meaning and moral color. This overarching narrative backdrop is often conceptualized as myth, which uses archetypal signs and motifs taken from shared social realms to form general story-like patterns that shape the way reality is viewed. As Barthes (1957/1978) notes,

myth is not about content but form — an uncritical way of seeing the world, rather than untrue content per se (Knight & Dean, 1982; Lule, 2001). News narrative's function of reinforcing certain messages and values as culturally dominant, described earlier in this chapter, takes place largely at the macro level. To the extent that news orients people to communally held values while also denying or marginalizing competing values (Bird & Dardenne, 1988; Campbell, 1991; Lule, 2001), it does so primarily by reinforcing macro-level myths.

Myth thus helps define the ideological framework within which stories are conceived and produced by journalists and interpreted by readers. It provides a common set of themes and story models that allow stories to be read in the same way they are intended, and that shared understanding allows news stories to reinforce the social order, defend consensus, and perform an important instructive role within society (Bird & Dardenne, 1988; Campbell, 1991; Lule, 2001). Lule (2001) identifies a set of universal mythical narratives that appear across news stories, such as hero, victim, scapegoat, and trickster; similar overarching patterns of mythical stories have also been seen in a variety of other cultural and communicative settings, including movies, literature, and fables (e.g., Booker, 2004; Campbell, 1949). This level of narrative is sufficiently all-encompassing to equally infuse both traditional and aggregated journalism, though the particular ways in which it is exemplified within aggregated news may be less visible; for example, it may be harder to perceive the mythical qualities of a 150-word summarized news story than in the 8,000-word magazine article on which it is based. Because of its ideological nature, this macro level of narrative tends to be the one of which journalists are least conscious, but it is also the one that also forms the broadest narrative frameworks within which the other two forms of narrative operate.

Meso (Story Arc) Level

The meso, or story arc, level of narrative largely governs the process by which journalists view certain occurrences as news events, and view certain news events as

particular kinds of news stories, whether good stories or boring ones, breaking stories or feature stories, and scandals or non-stories. This can occur within the production of a single news text or throughout several or even dozens of news accounts over the course of days, weeks, or months. The meso level is the one on which journalists perceive a house destroyed by fire as a mere event, but a dangerous rescue during that house fire as a *story*. But it is also the level on which journalists understand a months-long political campaign as a single story, perceiving narrative threads running through it as they construct them out of day-to-day campaign events and speeches.

Journalists perceive events this way because narrative shapes their vision of reality and structures their experiences, influencing their conception of newsworthiness and providing them with codes and archetypes through which to identify and classify events (Jacobs, 1996; Lule, 2001). Narrativity is inherent in the way journalists see the world; when they see an event, they understand it as a story — or else they don't understand it at all. "It is not merely that news workers tell stories, but that they receive the world in a 'storied' way," writes Jacobs (1996, p. 381). This ontological narrativity is in part a product of a thorough professional socialization that encourages journalists to see the world in terms of news stories and non-stories. This way of thinking that allows journalists to work efficiently by slotting events into narrative themes and templates with which they and their audiences are already familiar, a process that serves to routinize news production even when events are highly unexpected (Berkowitz, 1992; Bird, 1990). Jacobs (1996) refers to this process of applying a narrative vision of reality to news production as *narrative emplotment* and describes it as encompassing the construction of events as newsworthy and the composition of those events as narrative news texts.

The narrative emplotment process is built around a stock of thematic archetypal stories that journalists have constructed repeatedly and have developed skill in adapting to a wide variety of events and situations (Bird, 1990; Lule, 2001; Tuchman, 1978). These narratives draw from the mythical archetypes described at the macro level above,

but differ in a few important ways: They are often more specific — journalists are more likely to perceive news events as a "not in my backyard" or "stupid criminal" story than something as broad as a trickster story — and they are often applied more consciously, where myth is more ideological and taken for granted. As journalists cover ongoing stories, the narratives that develop over the course of those stories — for example, of a political candidate as out of touch with ordinary people — can in themselves become thematic narratives from which to draw when constructing individual stories. With those stock narratives in hand, journalists tend to approach events with an expectation that it will fit one of these story arcs, then find and shape facts to ensure that they do. If they cannot, they are dismissed as non-news and not covered (Gans, 1979; Tuchman, 1978).

This narrative-based determination of newsworthiness structures the rest of the newsgathering and news production process. It shapes the decision about what angle of a larger issue will be covered — "What type of story are we trying to tell?" — as the story is pre-conceptualized as fitting into a narrative framework before any information is gathered (Bock, 2011; Ekström, 2000). During the newsgathering process, it influences the sources that are sought — the characters in the story — and the interviews with those sources, as journalists continually weigh narrative possibilities and elements during interviews as they develop questions and evaluate responses (Bell, 1991). The meso level is thus the narrative level on which the greatest amount of journalists' narrative work takes place as they are constructing a story, though journalists themselves are more likely to conceive of their work as narrative in the micro-level terms of story form.[9]

[9] There is some evidence that journalists are becoming more conscious of their meso-level narrative construction. The use of "narrative" to describe meso-level media coverage, for example, has come into vogue over the past decade in a variety of contexts. It is used by media critics (particularly on the right), often as part of the pejorative phrase "media narrative," to describe an overarching theme of news coverage on an issue that is typically seen as running counter to reality (e.g., Kurtz, 2014; Ornstein, 2014). But it is also used more metajournalistically by journalists themselves, particularly in campaign journalism (e.g., Clark, 2012; Wright, 2012), as campaign coverage moves toward metacoverage (D'Angelo, Büchel, & Esser, 2014).

Micro (Story Form) Level

As a set of events is perceived and produced as a particular type of news story, it must also be communicated in a particular form — in a particular medium, with particular textual or visual conventions. This is the narrowest sense of news as narrative, the conceptualization of news as a story form. News form has been conceived as the textual and visual conventions that translate norms of narrative and storytelling and structure news presentation (Broersma, 2010; Schudson, 1989), such as the inverted pyramid or anecdotal lead in newspapers or the live stand-up in TV news. Though the two inevitably overlap because of the interdependence of thought and its expression (Broersma, 2007), form should not be confused with, and indeed can to some degree be separated from, the content of news itself. As Høyer (1997, p. 66) notes, journalism textbooks and journalism school curricula are full of prescriptions for news form, independent of content. Form can be thought of as a broader, more universal structure that carries content and presents and validates it to an intended audience, and the study of form can provide a link between the textual level and broader societal levels of meaning (Barnhurst & Nerone, 2001; Broersma, 2007, 2010).

News form acts as more than simply a container of content, however; it also plays an important role in journalists' attempts to publicly perform and establish their social authority. Form shapes the identity of journalists and news organizations, allowing them to stake out distinctive space within their profession (Broersma, 2007). By performing a largely fact-based, impersonal form for their audiences, journalists have sought to convey themselves as legitimate documenters and interpreters of events, allowing them to expand their control over the selection and definition of news as a form of reality (Barnhurst, 2005; Schudson, 1994). Form is a particularly effective vehicle for this sort of performative authority because it plays an important role in encouraging people to view a news account as valid and credible (Cottle, 1995; Harbers & Broersma, 2014). Form is what prompts us to recognize news stories as news stories as opposed to blog posts or works of fiction, and the credibility-maintaining function of form is what then prompts us

to read and interpret the information in those news stories differently than we might a blog post or short story. Forms are how we make sense of stories; before we understand them, we have to identify them as a certain type of text. For example, when we flip through channels on our TVs, we are immediately able to recognize the form of a local TV news broadcast because of the conventions that make up its news form. This is what prompts us to interpret its stories as representative of actual local happenings as opposed to fictional or far-away occurrences, and what prompts us to expect certain information (such as a weather or sports report) as part of the broadcast. This, in turn, shapes the way stories are produced, as Schudson (2011) notes: "Implicitly or explicitly, the writer learns to tailor the facts to a form and format in which their relationships will come to make sense" (p. 171). This means that stories and knowledge claims that cannot be included within a form's constraints are simply left out of news accounts, so that the truth a news account can claim to represent is reduced to the truth that can be expressed within its formal constraints (Høyer, 1997; Matheson, 2004).

News form is influenced by a variety of factors: ideology — specifically the ideology of objectivity (Tuchman, 1978) — technological and medium-specific factors such as the limited space of print newspapers (Høyer & Nossen, 2015), and market forces, as formal elements are used to reduce costs or maximize commercial appeal (Cottle, 1995; Høyer & Nossen, 2015), such as *USA Today*'s use of shorter stories and more colorful modular design to attract broader audiences in the 1980s. This combination of ideological and commercial influence ties news form closely into dominant social systems, making it very difficult to change. Change in form often comes only through a synthesis of changes in both political and commercial forces, which develops shifts in journalistic culture and routines (Barnhurst & Nerone, 2001; Høyer, 1997; Robinson, 2006).

These levels are conceptually distinct, but they function together in the production of news narratives. In producing a story about the aftermath of a tornado, for example, a

reporter might be guided by macro-level narrative in coming to the event with myths to be reinforced about the antagonism between humanity and nature, heroism of first responders, and the expression of people's inherent goodness toward each other through volunteerism. She might be guided by meso-level narrative in seeking out an archetypal "next-day story" with anecdotes from eyewitnesses, estimates of damage, and descriptions of the cleanup effort. And she might also be guided by micro-level narrative through the directive from an editor to produce a 1,500-word feature story as well as several photos and a minute-long video for the web, each of which contain their own textual and visual narrative conventions and expectations. (The video, for example, may contain less textual factual information in favor of lingering visual images of the damage, while the feature story may begin with an anecdotal lead before transitioning into a "nutgraph" with specific, factual statements about the extent of the damage.) While all three narrative levels might function in tandem as a journalist constructs a news story, they may take on greater or lesser importance within particular cases or news practices as influences on news production. In aggregation's case, the micro level of news form is where its narrative conventions appear to diverge most significantly from those of other, more traditional journalistic forms, through aggregation's extremely short story forms that often extract and summarize a few facts rather than attempting to thread them together, as news texts typically have. This is in part because the micro level is where journalism takes on the greatest variety overall. The following section will address that divergence, culminating in an overview of the growth of shortform journalism and the concept of the "atomic unit" of news.

THE EVOLUTION OF NEWS FORM AND GRANULATED NEWS

Inverted Pyramid

The discussion of news forms must begin with the inverted pyramid, which has served as the foundation for modern American news form, even as pure examples of its use continue to become more difficult to find. The goal of the inverted pyramid is "to

identify the essential and verifiable attributes of the news event" (Ytreberg, 2001, p. 360) and communicate them as efficiently as possible, thus creating the impression that the story has been stripped "of everything but the 'facts'" (Mindich, 1998, p. 65) in a thoroughly neutral and objective account of the reality of situation being described. Much scholarship has been devoted to pinpointing the circumstances surrounding the rise of the inverted pyramid, with numerous competing theories developing regarding its origins. Though the particulars remain a subject of debate, historians have established that the inverted pyramid was developed in the U.S. during the decades following the Civil War and became a standard within journalism by around the 1890s (Errico, 1996; Mindich, 1998; Pöttker, 2003; Schudson, 1978). The most commonly attributed influences on its development are the professionalization of journalism and the attendant growth of objectivity as a norm, both of which occurred during the same late-19th-century era that the inverted pyramid became a dominant journalistic form. The inverted pyramid formed a natural fit with both professionalization and objectivity because it allowed journalists to authoritatively and unequivocally describe events while removing as much evidence of their subjective involvement as possible. Through the combination of simple, factual language and heavy reliance on quotes and attribution, the inverted pyramid achieves a difficult juxtaposition necessary to sustain objective professional journalism: It frees them from responsibility for the content of their accounts while also reinforcing their authority to give those accounts (Høyer, 1997; Schudson, 2011; Ytreberg, 2001).

The inverted pyramid begins with a lead — typically a summary lead — that, in combination with the headline, describes what is seen as the most important element of the story first. The rest of the text is used not to develop a story around that information, but simply to add facts and claims to the lead in a sequence organized around descending importance and thematic coherence (Høyer & Nossen, 2015; Thomson et al., 2007; van Dijk, 1985, 1988). This is a very different structure from traditional narrative forms; the story is not ordered chronologically or to build dramatic tension, and the lead announces

the text's intention not to a tell story by dispensing with suspense entirely and answering as many questions as possible (Bird & Dardenne, 1988; Hartsock, 2000). It doing so, it "operates more to convey useful information efficiently than to build a shared world with readers emotionally" (Schudson, 2011, p. 186) and focuses on communicating transient events to a fickle public mind rather than connecting them into more holistic story structures (Park, 1940).

Beyond the structure of the inverted pyramid itself, news stories bearing the "hard news" form that accompanies the inverted pyramid use short paragraphs containing concise, denotative, past-tense language in noun-packed sentences that connote formality and facticity (Boczkowski, 2010; Esser & Umbricht, 2014; Schulman, 1990; Tuchman, 1978). Chronology is downplayed in the accounts of events as a way to both heighten immediacy and avoid assigning causality and responsibility, which could be seen as a violation of professional objectivity (Fulton, 2005). The first person is eschewed in favor of an impersonal third-person linguistic style that obscures the means by which the journalist determined the information, and quotes are used to shift the responsibility for the assertions made away from the journalist (Ekström, 2002; Muñoz-Torres, 2007; Schulman, 1990; Tuchman, 1972, 1978; Weaver, 1975). The net effect is a form that systematically distances the experience of the journalist from the account she produces, as Weaver (1975) describes incisively:

> the form of the newspaper news story systematically obscures any trace of the actual person who is doing the writing, who has observed the event in question at first hand, and who presumably has developed a critical understanding of it. What remains in the story is only a residue of impersonal statements of unambiguously observable fact … It is a style which suggests an author who is so passionately scrupulous about facts that he will write literally nothing that an independent investigator could not verify as a fact. (p. 88)

The inverted pyramid and the formal conventions of hard news that go along with it are thus one of the most important tools at the journalist's disposal to establish her own status as an objective observer who can both understand and reliably communicate authoritative accounts of reality.

The conventions surrounding the inverted pyramid — the summary lead, the use of impersonal and fact-centered language, the avoidance of the first person — remain the dominant form of American news (Broersma, 2007).[10] But the inverted pyramid itself is in decline. Several recent studies have found that the inverted pyramid and summary lead remain the most common form of newspaper discourse, but there has been a significant increase in more narratively oriented forms, including anecdotal leads and story structure oriented around dramatic tension or chronology (Johnston & Graham, 2012; Peer & Nesbitt, 2004; Weldon, 2007). Online journalistic forms have moved away from the inverted pyramid as well, thanks to the destabilization that hypertext brings to linear narrative forms by allowing hyperlinks to outside sources to stand in for the background information that has typically made up much of an inverted pyramid, as well as the more personal and narrative forms of blogging (Canavilhas, 2012; Deuze, 1999; Robinson, 2006). The result is a breaking apart of the inverted pyramid-based news form in two distinct directions: One, narrative longform journalism, has roots as old as the traditional news form itself but is evolving with renewed vigor; and the other, granulated shortform journalism, is much more nascent but beginning to find expression through the articulation of an "atomic unit" of journalism and the development of aggregation. The following section will explore the growth and development of each form in turn.

[10] American TV news maintains a distinct style, built on the same paradigm of hard news, but with more of a narrative style meant to highlight dramatic tension and much more evidence of the personal involvement of the journalist. In TV news, the reporter's presence establishes authority, unlike in print journalism through the inverted pyramid, where the reporter's absence establishes authority (Dunn, 2005; Ekström, 2000; Weaver, 1975).

Narrative Journalism

It may be tempting to portray narrative journalism — variants of which have been called literary journalism, New Journalism, or longform journalism over the decades — as a radical form of alternative journalism that has acted in opposition to the dominant journalistic form over the past several decades. But as Hartsock (2000) argues, narrative journalism shares a sort of twin history with traditional objective journalism, having been intertwined with it in various ways since each form's origin in the late 1800s. Narrative journalism has indeed been marginalized by the mainstream journalistic paradigm, but it has also significantly overlapped with it at other points. It began to develop in the 1880s and 1890s, as the "story" became a core organizing principle in professional journalism (Barnhurst & Mutz, 1997; Connery, 1990). As Anthony Smith (1978) put it in his study of British newspapers: "the 'story' became the basic molecular element of journalistic reality: a structured nugget of information — the basic unit through which the reader was to be presented with events" (p. 168). Most of these "stories" were still built around the summary lead and inverted pyramid. Still, within this general emphasis on "story," narrative and literary journalism emerged in the late 1800s as a reaction against journalism's newfound orientation around objective positivism and its strict dichotomy between news and the techniques of fiction. Narrative journalism grew in prevalence and prominence in the late 1800s and early 1900s, as one branch of it became associated with Progressivism and the muckraking tradition, and another, more palatable branch was folded into the growing form of newspaper feature writing (Connery, 1990; Hartsock, 2000; Weldon, 2008).

The first wave of narrative journalism had been focused on a more subjective and interpretive style, and by the 1920s and 1930s, that style had been incorporated by much of mainstream journalism. Professional journalists began to see themselves as more autonomous interpreters rather than stenographers — though some of this shift was tied to the rise of the authoritative and summative inverted pyramid style, rather than longform journalism itself — and began both practicing and calling for more interpretive

voice and narrative flexibility in journalism (Forde, 2007; Pauly, 2014; Schudson, 1982). Throughout the "high modern" period of professional journalism from the 1950s to the 1990s, mainstream journalism remained professionally entrenched in a paradigm of professional objectivity and more transgressive incorporation of literary forms into journalism were relegated to marginalized movements such as New Journalism (Hallin, 1992b; Pauly, 2014). But during that time, that mainstream journalism also became more suffused with interpretive and narrative forms. Across media and genres, stories steadily became longer (Barnhurst, 2003; Barnhurst & Mutz, 1997; Stepp, 1999), with broader time horizons and fewer events, as events shifted toward the background in favor of more interpretive themes and trends (Barnhurst & Mutz, 1997; Høyer & Nossen, 2015; Patterson, 1997). Journalism also moved toward a more interpretive approach, with more explanations to how or why things occurred, more references to broader contexts and social issues, shorter sound bites from newsmakers, a more prominent voice for journalists, and a more narratively oriented construction of stories, both in print and on TV (Barnhurst, 2003; Barnhurst & Mutz, 1997; Baym, 2004; Cushion, 2015; Esser & Umbricht, 2014; Fink & Schudson, 2014; Hallin, 1992a). Journalism's professional institutions have reinforced this shift, as the Hutchins Commission famously pushed for more explanatory and contextual journalism, and longform journalism has been a magnet for professional prestige and awards (Dowling & Vogan, 2015; Weldon, 2008).

This professional growth of narrative journalism has only accelerated with the ascendance of online journalism since 2000. Neveu (2014) identifies a current wave of such narrative journalism, often simply called "longform journalism," that is built around the tools of social science and in-depth investigative reporting as well as sophisticated narrative devices drawn from fictional storytelling. That journalism has formed a natural fit with new storytelling techniques that take advantage of the web's capacity for interactive multimediality, for which *The New York Times*' Pulitzer Prize-winning 2012 feature "Snow Fall," about skiers caught in an avalanche, has served as an exemplar and

professional catalyst (Dowling & Vogan, 2015; Greenberg, 2013; Jacobson, Marino, & Gutsche, 2015).[11] This longform journalism has at times taken on a very conscious resistance to the more compact forms of aggregation and mobile journalism that are perceived as dominating contemporary news production, with longform writers and editors often decrying such journalism in public statements and interviews (Johnson, 2010; Neveu, 2014; Petersen, 2013; Smarsh, 2015), asserting narrative as a crucial means of understanding social reality and traditional investigative reporting techniques as the epistemological method of supporting that narrative.

Epistemologically, narrative journalism pulls away from the paradigm and form of traditional journalism, if not its methods, in substantial ways. Narrative journalism's epistemology has been defined primarily by its embrace of subjectivity as a way of knowing and mediating the world — something that is not a necessary element of longform journalism, but has nonetheless characterized since its origins (Connery, 1990; Hartsock, 2000). This openly subjective approach has earned narrative journalism both professional and popular praise because of its depth of insight and transparency, but it has also brought the practice additional skepticism regarding its factuality. Narrative journalism is thus bound to the journalistic norms of veracity in order to maintain professional credibility and legitimacy (Harbers & Broersma, 2014). At its most extreme, narrative journalism has skirted the boundary between fact and fiction, one that scholars have found difficult to definitively place. Instead of the traditional journalistic epistemological standard of verifiability, some scholars have proposed a standard of verisimilitude to account for the impracticality of verifying that which is affirmed in many narrative journalistic stories, such as snippets of dialogue from long-ago conversations (Aucoin, 2001; Bruner, 1991; Lehman, 1997). Journalists themselves have

[11] It is important to note that the moniker "longform journalism," while currently popular, is a bit of a misnomer. Length is not actually a form, and lengthy journalistic narratives can take on a variety of forms. The term is thus used as something of a catch-all for long news narratives, whether those narratives are textual, visual (as in news documentaries), or some combination of the two (as in "Snow Fall"-like multimedia presentation), and whether they are essays or more based on reportage.

seen the fact/fiction boundary as a much more solid one, applying the same standards of verification to narrative journalism as all other forms of journalism (Kovach & Rosenstiel, 2007), a practice that was made glaringly evident in the public censure for *Rolling Stone* over factual discrepancies in a lengthy 2014 feature (later retracted) about an alleged rape at the University of Virginia (Coronel, Coll, & Kravitz, 2015). The reporting methods of narrative journalism are drawn back, then, toward those of traditional journalism. Paradigmatically, however, narrative journalism seems to diverge from the traditional journalistic model. It is often judged primarily on aesthetic rather than epistemological grounds — whether it resonated with the reader or provided emotional satisfaction — so it tends to orient itself toward the story model of journalism, emphasizing the report's relationship with readers, rather than with events (Eason, 1981). Likewise, it does not claim to present reality indexically in its text, but invites the reader to construct reality using the experiences and representations of the journalist's story.

Shortform Journalism

Journalists and the public have held for decades the impression that the news is getting shorter and less substantial as the news media compete for the shrinking attention of audiences. It is a complaint that could be heard at the advent of online news, at the launch of *USA Today* and the rise of corporate newspapers, at the ascendance of television news, and of radio news before that.[12] But it is also a complaint that has been wrong almost as often as it has been voiced. As Barnhurst (2005) points out, even as journalists have complained of shorter and shorter stories, news accounts have only gotten longer and longer over the past century. This continues to hold true in several ways, as we saw in the previous section regarding the resurgence of longform journalism online. But this time around, there may actually be something to the common complaint: We are also beginning to see a genuine move toward shorter news forms, both online and

[12] Garvey (2013) notes that the complaint was even present in the late 1800s, when fragments of information like household tips and scientific and historical items were popular within newspapers.

off. And in several of those cases, the shift is not simply a compressed version of the same news, but part of a rethinking of the role of narrative in news and the epistemological nature of news itself.

Much of this change is relatively recent — in the decade since Barnhurst's assertion — and driven by two simultaneous forces: The immense economic hardships that have faced many news organizations, and the affordances of technologies that have helped create a news consumption environment that privileges shorter forms. The evidence of shortened news in traditional media forms has not been examined as comprehensively as Barnhurst (2003, 2005; Barnhurst & Mutz, 1997) has confirmed their previous lengthening, but Pew's Project for Excellence in Journalism found in 2008 that while the number of stories in American newspapers was steady or increasing, the average length of those stories was largely declining, with many stories being replaced by briefs that had originally been written as short blog or web items. The report concluded that "today's readers receive a similar, or even greater, breadth of coverage in their daily paper than a few years ago, however much of it comes in more of a digest form" (p. 13). A more cursory analysis by the *Columbia Journalism Review* (Starkman, 2013) found that long stories at the *Los Angeles Times*, *The Washington Post*, and *The Wall Street Journal* were all down significantly from 2003 to 2012 (though *The New York Times* held basically steady).[13] More anecdotally, Weldon (2008) notes several efforts by regional newspapers to move to shorter, more "digestible" story formats during the mid-2000s. Among newspapers, the trend was perhaps most conspicuously displayed by the Rupert Murdoch-owned *Wall Street Journal* (Chittum, 2011; Starkman, 2013). More recently, both The Associated Press and Reuters issued well-publicized memos in 2014 pressing their writers to file as many stories as possible under 500 words (Shafer, 2014), and

[13] Cushion (2015) also found that British television news reports were getting shorter, though he attributed that difference to the growth in live coverage formats, which tend to run shorter than pre-produced packages.

editors at more digitally native publications such as Quartz have called for journalists to end their orientation around mid-length, 800-word articles (Morrissey, 2015).

The economic calculus behind these changes is simple: News media budgets are shrinking dramatically, leaving less space in print for lengthy stories and smaller newsroom staffs — with fewer specialized reporters — making it more difficult to do the kind of in-depth work that longer reports typically require (Neveu, 2014; Project for Excellence in Journalism, 2008; Starkman, 2013). Shorter news accounts are easier and cheaper to create through easily routinized and standardized forms of production (Neveu, 2014). In The Associated Press' case, the call for shorter stories was a direct result of the news agency's subscribers' lack of time to cut its stories, thanks to smaller editing staffs (Farhi, 2014). The problem extends to online journalists, who often have too little time to do much beyond repackaging others' work in abbreviated form (Boczkowski, 2010; Phillips, 2010; Vobič & Milojević, 2014). Similarly, the continual push for speed and instant publication in the online environment can lead journalists to publish individual facts via blogs or social media before pulling them together into a full story, resulting in shorter pieces being published as news (Saltzis, 2012).

These economic pressures toward shorter news forms are compounded by the technological environment in which contemporary journalism is taking place. Most broadly, hypertext breaks down the structure of traditional linear narratives by creating a more rhizomatic, fragmented structure with multiple entry points and a reduced ability for the author to impose an overarching narrative frame (Ryan, 2001). Blogs were the first online form to take full advantage of this fragmentation, reproducing news on the web as a "postmodern pastiche of small stories with no grand narratives," replacing the traditional news story with "small slices of stories which are seemingly endlessly reproduced" (Wall, 2005, p. 166). In addition, blogging's annotative form of journalism broke down the invisibility of the narrator through its intertextual interrogation of other texts, drawing attention to other possible ways to construct stories (Graves, 2015). This

fragmentation of traditional news narrative into granular, chaotic, intertextual, and repeatedly reproduced updates has been noticed since then in online forums (Robinson, 2009) and user-generated multimedia sites (Chouliaraki, 2010). In addition, the swift ascendance of news consumption on mobile devices (Newman & Levy, 2014), and news organizations' subsequent shift toward producing news for those devices, has placed a premium on news form that can be consumed quickly and displayed aesthetically on a small screen. The push toward shorter-form news, particularly for mobile platforms, has been driven by a response to a perception of shorter audience attention spans and stronger audience desires for smaller pieces of information than are contained in a traditional news article (Blanda, 2012b; Circa, 2012; Neveu, 2014).

News aggregation is one form in which this move toward shorter news has manifested itself; as detailed earlier in this study, the task of compressing and arranging already-published information into various shorter news forms is becoming an increasingly part of newswork, and such aggregated news content has long drawn a significant share of the overall consumption of news online (Anderson, 2013a; Boyer, 2013; George & Hogendorn, 2012; Patterson, 2007). Another prominent form pushing toward a more granular conception of news is that of "data journalism," or the use of data analysis as the basis for journalistic investigations and stories. Data journalism is not necessarily shorter than traditional journalistic forms — indeed, it is often longer — but has been articulated as a means to go beyond narrative and traditional article-based news forms to convey news. Data journalism is a descendant of the decades-old practice of computer-assisted reporting (CAR), but where CAR subordinated its use of data to journalistic narrative, data journalism tends to conceive of the data itself as a substitute for that narrative — a site for users to piece information together in novel and personal ways and thus construct their own narrative, as opposed to a set of evidence incorporated into a pre-packaged narrative (Coddington, 2015; Lewis & Usher, 2013; Parasie & Dagiral, 2013; Powers, 2012).

Narrative and the Atomic Unit of News

The implicit (and occasionally explicit) premise of this shortform journalism, and aggregation in particular, is that the conventional news narrative is an unnecessarily cumbersome package in which the true element of news is trapped. The work of aggregation is conceived as an effort to free that core news element and set it on its own, with as little extraneous material as possible. This is at its root an epistemological argument, an assertion that news and social reality are not things best understood by being assembled into narratives, but by being disassembled into smaller, discrete factual units of information. This notion that facts can and should be isolated from narrative directly contradicts scholars' assertion that journalists can only understand and identify facts through the narratives that constitute them (Bennett & Edelman, 1985; Ettema & Glasser, 1998). In this paradigm, the knowledge journalists have to contribute to the public is thus not the broad sensemaking that comes with a narrative vision born from deep expertise, but instead the ability to gather, identify, verify, and isolate individual pieces of information that individuals can use to fill their own information needs, whether those needs involve narratives or not.

This epistemological argument has found its expression in discourse, popular in the early part of this decade, calling for journalists to rethink the "atomic unit" of news (e.g., Glick, 2011; Ilfeld, 2011; Jarvis, 2011, 2012; Kovach & Rosenstiel, 2010; Waite, 2011). The article, according to this discourse, has been the basic unit of news for the past century, but it was a product of the particular routines and exigencies of industrial print journalism, the conditions of which no longer dictate news production in contemporary digital environments. Without the constraints of space and time that the print-based production process imposes, the argument goes, journalists not only can but must free themselves from the article as news' default narrative form (Glick, 2011; Holovaty, 2006; Ilfeld, 2011; Jarvis, 2011). Jonathan Glick, CEO of the now-defunct social news aggregator Sulia, articulated this argument succinctly:

> There is nothing sacred about the article for the transmission of news. It is a logical way of packaging information for a daily print run of a newspaper and a useful format around which to sell display advertising. It has survived into the Internet age for reasons of tradition and the absence of better formats. We have come to accept it as a fundamental atom of news communication, but it's not. Given faster, easier alternatives, the article no longer makes sense to mobile users for consuming news. (2011)

Journalism pundit Jeff Jarvis (2011) ties this move away from the article to the idea of journalism as a process, arguing that the product of journalism is not any particular news form, but the process itself of gathering information for the public. As a mere byproduct of this process, the article can then be broken down into a series of "assets" that can be reorganized in whatever form is most useful to the consumer (Jarvis, 2012).

What then, should be considered the atomic unit of news, if not the article? These writers have suggested a broad and rather inconsistent range of possibilities for the new atomic unit of news. One mobile news aggregation app, Circa, launched in 2012 with a relatively systematic working definition of an atomic unit of news; its founding editor, David Cohn (2012) described its atomic units as pieces of information that might include "facts, statistics, quotes, events and images" and were meant to constrain content to be concise and factual, thus precluding analysis or opinion as an atomic unit. While they are not nearly as explicit as Cohn, several other writers also imply that articles can be broken down into discrete, verifiable units of information that may resemble what scholars have referred to as the journalistic fact. But those writers often refer to the atomic unit as something else, if they describe it at all. Several of them conceive of the atomic unit as a particular way of assembling facts — in one of the more popular conceptions, it is described as a Wikipedia-like continually updated topic page that would contain substantial background information but would also highlight the most recently updated facts (Blanda, 2012a; Fest, 2008; Kovach & Rosenstiel, 2010). Blanda (2012a) also

suggested the social media-style streaming feed as a fundamental way of comprising atomic units, a different way of breaking down and re-presenting the pieces of information that make up a news article.

Some slippage in the term "atomic unit" is evident at this point; some use the term to refer to the smallest, indivisible, and most elemental unit of news (sometimes characterized as the fact), while others seem to be defining it as the most common or most important unit of news, though not necessary an indivisible one. The former use is more precise, and the more correct use of the atomic metaphor. But if "atomic unit" is used in strictly that indivisible and elemental sense, then it is not clear that the story has ever been the atomic unit of news. Instead, the traditional "atomic unit" of news may have been both fact and story, intertwined, since neither one can be constituted without, or fully distinguished from, the other (Ettema & Glasser, 1998).

Without using the language of the "atomic unit," several others have articulated something similar to Cohn's (2012) concept of news as concise and factual pieces of information through the idea of news as structured data. Influential programmer/journalist Adrian Holovaty first expressed the idea in 2006, arguing in a blog post that while they conceive of their work essentially in story form, journalists are actually mostly gathering structured data — "information with attributes that are consistent across a domain" (para. 13) — that would be more usefully organized as such, as opposed to being hidden within the text of a story. When stored in this way, the information could now be sorted and searched systematically, yielding all kinds of additional potential uses in addition to serving simply as an archive of news articles (Holovaty, 2006). "Information," Holovaty told one interviewer, "is exponentially more valuable if it's structured" (Niles, 2006).

The concept of news as structured data is an important connection between aggregation and data journalism. Holovaty's post became a foundational statement in the development of the current wave of data journalism, inspiring the development of the

Pulitzer Prize-winning PolitiFact, among other projects, as an effort to use structured data to track truth and falsehoods in politics (Waite, 2011, 2013). Conceptually, it links the two practices around the concept of the "granulation" of news — the idea that the news should not be understood as a series of narrative themes or stories, but as a set of discrete, granular pieces of factual information that can be structured, organized, and pieced together into various customizable wholes to create public knowledge outside of narrative. Under a structured data model, for example, a journalist covers a house fire not only by producing an article, but by entering a series of discrete pieces of data (address, cause, damage amount, fire departments involved, etc.) into a database so they can be accessed, recombined, and analyzed in other forms (Conover, 2009). Within data journalism, this focus on news as discrete pieces of data allows the data itself to be seen as news, which can make the simple publication of data a form of journalistic work, rather than defining journalism as the work of finding stories or narrative within that data (Parasie & Dagiral, 2013). Similarly, granularity is seen as a key to producing knowledge within the data journalism mindset because it emphasizes abstract, computational thinking rather than using a narrative paradigm to connect data and find meaning in it — for example, by encouraging conceiving of a house fire as a latent set of data points that could be used in larger data analysis rather than simply a routine news brief (Gynnild, 2014; Parasie & Dagiral, 2013).

The granulation of journalism and the drive for a new "atomic unit" of news are thus not about simply producing shorter forms of news. They are instead an attempt to develop a new epistemological way of seeing news, one that views news as a set of small, discrete nuggets of factual information from which knowledge is created not by using narrative to connect those pieces and create meaning, but by systematically stripping out narrative so that they may be held up on their own as pure, unadorned fact. These granular facts may be narrativized to help produce meaning from them, but that

narrativization can be left to be done by the user or through another interaction between members of a news ecosystem.

Conclusion and Research Questions

The core tension in aggregation I have outlined in this chapter — that aggregation and granulated news are attempts to divorce news facts from the narrative forms in which they have traditionally been housed, but that they remain tied into narrative ways of interpreting the world as news — is a more extreme version of a conflict that has defined journalism as a whole. Professional journalism can still be characterized by its continual tension between fact and narrative, but with the advent of a granulated shortform journalism and the resurgence of longer narrative journalism, the stasis in which the two have held each other up is beginning to deteriorate as the two pull further apart, responding in opposite ways to the same basic factor: the erosion of the conscious mutual constitution of fact and narrative in producing news accounts. Most journalism has held both sides simultaneously in tension even while emphasizing one or the other; even the most strictly fact-based inverted-pyramid news accounts have incorporated narrative in the way journalists have constructed their events as newsworthy and their facts as relevant. And even the most freewheeling, literary narrative news accounts have had to make concessions to journalism's fact-based epistemological methods, lest they be read as fiction. Similarly, while some advocates of granular shortform journalism have at times acknowledged the continued need for narrative in journalism (Buttry, 2011; Fisher, 2011), others have actively pushed to remove narrative from the construction of news, viewing it as detrimental to understanding of news and of diminishing importance to journalistic practice (Jarvis, 2011).

Granular shortform journalism appears to be doubling down on realism, particularly in its treatment of facts and data as something that can be considered an atomic unit, that can and should be extracted from narrative. This view of journalistic fact presupposes that such fact and data can be arrived at apart from narrative, and that they

can "speak for themselves" in providing valuable, usable knowledge about reality. Aggregation is of a piece with this paradigm, conceiving of news articles as a collection of facts or pieces of information that can be pulled apart from the article's narrative and then reassembled without it. This assumes an ability for facts to be separated not only from narrative, but from values as well, for if facts can be stripped from their original value-laden context and retain the same informational utility (or even gain value), then values necessarily play only a minimal role in construing or constructing those facts. Notably, the discourse on developing new atomic units for news precludes opinion: Cohn (2012) explicitly rules out opinion or analysis — by a Circa writer or by anyone else — as one of Circa's atomic units, and the Wikipedia article on which one popular conception of the atomic unit of news is modeled is also built on a strict separation between fact and opinion embodied in its core adherence to a "neutral point of view" (Thorsen, 2008). Upon initial review, there seems to be little room for either narrative or values even more generally in constituting or making sense of facts in the aggregational mindset.

But this resistance toward narrative as a central organizing device does not mean narrative plays no role in news aggregation work. On the contrary, narrative is present throughout the process of constructing news facts and of presenting them within the parameters of a particular news form, even if the form itself may not bear many narrative qualities. All news forms are stories, in the sense that they are shaped by elements of narrative, even if in some cases they don't form a narrative by themselves but instead tie into a larger macro- or meso-level narrative structure. Some news forms are simply more storylike, and in different ways, than others. The question, then, is: How storylike is aggregation, and on what levels? To what degree is narrative an organizing factor for aggregators — either on the meso level, in their internal understanding of the newsworthiness and factuality of the accounts they aggregate, or on the micro level, in the presentation of those accounts? Understanding these issues may go a long way toward

determining the degree to which a granulated news mindset represents a departure from the traditional journalistic mindset, and if it is a distinct shift in the journalistic view of the role of fact and narrative in constituting news, what that shift might entail.

This leads me to pose the following questions:

RQ8: What role do aggregators see for narrative form in news?

RQ8a: Do aggregators conceive of themselves as storytellers?

RQ9: What narrative forms do they see and use as most appropriate for news?

RQ9a: How do they produce news to fit into those forms?

RQ10: On what levels do narrative considerations influence news aggregation?

RQ10a: How do aggregators consider macro-level narrative elements in their production of news?

RQ10b: How do aggregators consider meso-level narrative elements in their production of news?

RQ10c: How do aggregators consider micro-level narrative elements in their production of news?

METHODS

Chapter 5: Overview of Participant Observation and Interviews

The purpose of this study is to evaluate news aggregation as a set of epistemological practices and forms, specifically in relation to the epistemological practices and forms that have constituted much of modern professional journalism. The study examines the epistemological and professional underpinnings and outgrowths of news aggregation through three related strands: the nature of aggregation's approach to assembling and weighing evidence to construct public knowledge in comparison to reporting work, aggregation's use of narrative forms and conceptions to understand and communicate the news knowledge it constructs, and aggregation's understanding of its own professional identity in relation to the journalistic field more broadly. Through all of these strands, the study aims to illuminate the emerging values and practices of news aggregation and, particularly to the extent that aggregation makes up a significant portion of news work, the shifts in these epistemological norms and practices in contemporary journalism as a whole. This chapter will explain the methods of participant observation and interviews through which I examined these issues in this study. It does so by first outlining previous approaches to the study of aggregation and online news production; second, by presenting a rationale for the use of participant observation and interviews in this study; third, by explaining how this study's observation and interview data was collected and analyzed; and finally, by explaining its compliance with ethical guidelines and reflexively exploring my own role and experiences in collecting this study's data.

Addressing the issues at the core of this study requires close, ground-level observation of news aggregation practices at work, as well as in-depth exploration of the cultural norms and professional rationales behind these practices. The relationship between epistemological precepts, professional values, and institutionalized practices is a complex and multi-faceted one, and one not easily captured through social science's traditional quantitatively based variable-analytic methods. In order to more closely

observe and more deeply understand these practices and the values behind them, I employed a combination of participant observation and in-depth interviews in this study. The versatility of these two methods used together also helps address the challenge of the multi-sited, fragmented, and varied nature of aggregation as a set of practices, allowing me to sample broadly across types of aggregators while also preserving the depth and richness of data that is critical to the analysis.

This chapter presents a justification and description of the study's research methods by first placing it in the context of other methodological approaches to the study of aggregation and online news production, then offering a rationale for the use of small-scale participant observation along with in-depth interviews, describing the methods of data collection, and finally offering a reflexive note on my own role in the data collection process.

PREVIOUS APPROACHES TO AGGREGATION AND ONLINE JOURNALISM RESEARCH

We are in the midst of a fertile period for research that examines online news production through methods originating in ethnography — enough to place us, as Anderson (2013a) describes it, "at the threshold of a second golden age in news ethnography" (p. 167). Starting with Boczkowski's (2004) pioneering study of online news production within newspapers, numerous scholars have undertaken ambitious ethnographic studies of various facets of online news production. Several of those scholars have turned lengthy newsroom ethnographies into well-received scholarly monographs (e.g., Anderson, 2013a; Boyer, 2013; Robinson, 2011; Ryfe, 2012; Usher, 2014), recalling the initial wave of newsroom ethnographies in the 1970s and 1980s (e.g., Fishman, 1980; Gans, 1979; Schlesinger, 1978; Tuchman, 1978) that propelled the nascent development of media sociology research and presaged the recent emergence of the thriving subfield of journalism studies. Beyond those large-scale projects, other influential studies have employed smaller-scale approaches to participant observation and interviews to shed light on various areas within the rapidly developing online news

ecosystem (e.g., Lewis & Usher, 2013; Paterson & Domingo, 2008; Schmitz Weiss & Domingo, 2010; Singer, 2010). This study is of a piece with the latter group of studies, using a combination of short-term participant observation and numerous interviews to gain substantial insight into a focused area of journalism practice without engaging in a lengthy (and logistically and financially difficult) period of ethnographic immersion in a newsroom setting.

On aggregation in particular, much of the previous research has been centered on consumption, using surveys and statistical modeling to focus on economic questions about aggregators' impact on traditional news providers (e.g., Dellarocas et al., 2013; George & Hogendorn, 2012; Huang et al., 2013). A handful of studies have explored the production of aggregated news using qualitative methods (Anderson, 2013a, 2013c; Boyer, 2013; Vobič and Milojević, 2013), and several other studies have used interviews and observation to study online journalism more generally, touching on aggregation indirectly or marginally as part of that focus (e.g., Agarwal & Barthel, 2015; Boczkowski, 2010; Quandt, 2008). Of these studies, Anderson (2013a, 2013c) and Boyer (2013) have made by far the most substantial inquiry into aggregative work. Both employed months of observation of aggregators at work, but both were only a part of broader studies — Anderson's on local journalistic networks, and Boyer's on digital newswork — and neither were focused on examining aggregation comprehensively as a distinct journalistic practice. This study is aimed at extending the valuable work those scholars have done, using similar but scaled-down methods to examine aggregation work with both a tighter focus on aggregation itself and a more comprehensive set of questions about the epistemological, professional, and procedural factors at work in it.

RATIONALE FOR PARTICIPANT OBSERVATION AND INTERVIEWS

In addressing the epistemological, professional, and cultural issues that animate this study, a more qualitative, interpretive, and inductive empirical approach is preferable to the traditional quantitative, positivist, and deductive methods of the field of

communication studies. There are several reasons for this fit: First, qualitative methods in general — and those derived from ethnography in particular — excel at examining and yielding insight into the taken-for-granted aspects of culture that are difficult to grasp through more closed quantitative methods (Cottle, 2007; Tracy, 2013). Journalists are often incapable of seeing their routines and professional/ideological assumptions themselves, and the relatively thin data of surveys and quantitative content analysis typically fail to bring out these deeply embedded values and practices as well (Reese, 2001; Tracy, 2013).

Second, concepts such as the epistemology of news present an acute version of this problem, because they are especially difficult for journalists to conceive of or apply in abstract terms in a closed, self-reported mechanism such as a survey, particularly with any substantial reliability in terms and definitions across a broad sample of journalists. Such concepts that are difficult for participants to define and generalize tend to be more fruitfully examined through particular cases with qualitative methods, rather than through abstract principles with more quantitative measures. Finally, because the work of news aggregation is a relatively new, unexplored area, any quantitatively based method would inevitably be too limited, confusing categories and terms because they aren't yet well defined and closing off several potentially fruitful areas of inquiry entirely because they simply are not yet known. More open-ended and in-depth qualitative studies such as this one may serve as a foundation for more focused quantitative studies in the future, but this area of work is not well enough understood as yet to build valid quantitative measures around it.

Ethnographic participant observation is a particularly well-suited method for the type of inquiry in which this study engages. Ethnographic research has played a valuable role in illuminating forms of news production within the field of mass communication research because, as Cottle (2007) argues, it counters the problems of speculation and inference that often plague textual analysis of media content. Because of the immense

amount of rich, empirically grounded data it produces, newsroom ethnography also complicates our accounts of media production, defying simplification and making for more rigorous scholarship overall (Wahl-Jorgensen, 2010). Importantly, participant observation in newsroom settings allows researchers to see processes at an organizational level rather than the individual level on which most quantitative research tends to focus, giving insight into a crucial level of influence in news production. In doing so, it highlights the contingent and culturally mediated nature of media production, exploring not simply how such production is changing, but how cultural, institutional, professional values are informing and interacting with those changes (Cottle, 2007; Singer, 2008).

Ethnography typically requires immersion in a particular cultural site over a lengthy period of time. But in the case of newsroom participant observation, many of these benefits can be realized through shorter, more concentrated periods of fieldwork at one or several sites because contemporary news production work tends to be characterized by routinized and repetitive processes (Domingo, 2003). This method is particularly useful in capturing specialized areas of news production, or a specific set of news production practices that can be characterized in more closely bounded terms, especially in conjunction with in-depth interviews (Hansen, Cottle, Negrine, & Newbold, 1998; Wahl-Jorgensen, 2010). Some scholars have gone further, calling for the ethnography of news to move away from a focus on newsroom sites as an organizing framework for study, especially as newswork becomes more decentralized and networked (Howard, 2002; Wahl-Jorgensen, 2010; Zelizer, 2004). This study involves participant observation at particular newsroom sites, but does so out of a realization of the value of observation in understanding how journalistic practices and values are enacted in specific contexts. At the same time, it goes beyond the newsroom context through in-depth interviews, several of which were conducted with people who work from home. It is important to note that the participant observation in this study is not, strictly speaking, ethnographic in nature, as it does not involve the long-term cultural immersion that

ethnography often entails (Hammersley & Atkinson, 2007). Still, the use of relatively brief but focused periods of observation provides an important methodological foundation to address the issues of this study, providing a rich set of specific, empirically grounded data on the ways in which epistemological and professional principles play out in particular cases of news production processes.

Interviews are a crucial supplement to this participant observation. They are a core part of the work of ethnography (Hammersley & Atkinson, 2007; Hansen et al., 1998) and can be extremely useful in understanding participants' opinions and justifications for their own behavior, allowing researchers to strengthen or complicate other data and test interpretive hunches (Tracy, 2013). Interviews are especially valuable methodological tool in this study for two primary reasons: First, aggregation tends to be a very cognitive rather than kinetic activity (Boyer, 2013), meaning that many of its most important processes are internal and cannot be easily accessed through observation. Ethnographers of digital news production have noted how difficult it can be to observe processes that take place primarily through screenwork and consist largely of journalists sitting silently in front of computers (Domingo, 2003; Ilan, 2014; Puijk, 2008). One of interviews' central advantages is their ability to provide insight into the cognitive processes that cannot be observed directly, or inferred from what is observed (Lindlof, 1995), which makes it an ideal supplement to participant observation in this case. Numerous recent studies have profitably employed interviews to allow journalists to talk through the more heavily cognitive aspects of their work (e.g., Nielsen, 2012; Shapiro et al., 2013). Second, interviews provide access to forms of work that are not easily or efficiently accessible through traditional observational methods, such as people working alone and from home. Aggregation work is often not closely tied to the newsroom setting, with many journalists doing aggregation remotely or independently, making participant observation difficult and less helpful in generating insight. Interviews thus allow me to extend the number of cases covered in the study while providing access to less easily

observed environments in which this work is conducted and also enabling more direct inquiry into values or norms at which short-term observation can only hint.

METHODS OF DATA COLLECTION

Sampling

Site selection is particularly important for this study, since news aggregation is a rather broad phenomenon, encompassing a wide range of environments and practices, as illustrated earlier through Figure 1 in Chapter 2. Case selection in this study was built primarily around achieving variance, partly in an attempt to encompass that range of aggregation practice and partly so that multiple perspectives and environments would add depth and texture to the data (Corbin & Strauss, 2008). Within cases for both participant observation and interviews, I sought variation primarily along the axis of journalistic professionalism — the degree to which aggregators enjoy professional status and have been socialized into professional norms and values. This axis includes aggregation within traditional news organizations on one end and non-institutional tech startups and informal groups on the other. Independent individual aggregators could also be placed on this spectrum based on their professional background. This axis was chosen as an organizing dimension for case selection because of the insight it can give into the relationship between aggregation norms and practices and those of traditional professional journalism, as well as its ability to elucidate the role of organizational culture in aggregation work.

On a secondary level, cases were also sampled across a range of media and narrative forms (i.e., apps, websites, and video platforms). This was not as central of a dimension to the case selection process as the journalistic professionalism axis, but it did serve two primary purposes: It helped capture the breadth of a fragmented form of newswork, and it provided an analytical aid in detecting factors and processes that might have been the product of a particular medium-based mode of aggregation, rather than typical of aggregation as a whole. Because of the study's focus on aggregation as a form of newswork, nearly all of the cases chosen for observation included a central element of

human labor, as opposed to automated content selection and production processes. In both the construction of my sample and the types of questions I asked, I aimed to analyze aggregation primarily (though not exclusively) at the routine, organizational, and social institutional levels of the hierarchy of influences on media content (Reese, 2001; Shoemaker & Reese, 2014), examining the characteristics and variations of professionalism and epistemology of news aggregation as it is enacted in everyday work routines, organizational goals and structures, and the field of professional journalists more broadly. The particular means of sampling for observation sites and interview participants will be discussed in further detail in those sections below.

Participant Observation

Participant observation consisted of three weeks of fieldwork, totaling approximately 100 hours, in January and February 2015, with one week each at three news organizations, two of which requested to remain anonymous in the study (their reasons will be discussed later in this chapter):

- Circa, a startup mobile news app founded in 2012, shut down in June 2015, and based on the concept of the atomic unit of news, in which users "followed" ongoing stories and were given updates only with new information regarding those stories. Each of Circa's stories was broken into a series of "points," which can be either a single, verifiable statement (called a "fact" by Circa's staffers), a quote, a map, or an editor's note. Stories were conceived as ongoing issues or developing series of events (such as religious liberty legislation, the rollout of a tech product, or a foreign plane crash) and were updated when significant, verifiable events occur within those issues. Those who followed the stories were sent a push notification for most updates and were shown only the newly added points, while all other readers saw the full story — a set of strung-together points on the entire ongoing story.

Circa focused heavily on hard news, with a mix of both U.S. and world news, though it also occasionally covered offbeat stories and had a particular emphasis on tech news. Its news updates were aggregated from a variety of sources — major professional news organizations, wire services, specialized news organizations, and directly from public statements by officials. All of the work of selecting, writing, and organizing stories was done manually, and as of the time of my visit in January 2015 the app had a full-time editorial staff of eight, along with several part-time contract workers who helped cover night and weekend shifts. Circa was co-founded by Cheezburger CEO Ben Huh, entrepreneur Matt Galligan (currently its CEO), and developer Arsenio Santos (currently its CTO). It was based in San Francisco but also had an office in New York, and nearly all of its editorial employees worked remotely.

Circa's business model was always quite vague. Its leaders articulated plans to sell "native advertisements" allowing advertisers to produce their own ongoing "stories" which users could follow, as well as licensing its content management system (Bilton, 2014; Peterson, 2014), though neither of those materialized. At the time of my visit in January 2015, Circa was attempting to raise a round of Series A venture capital funding, though it announced in April 2015 that it had failed to secure that funding and was exploring a sale (Primack, 2015). The company was unable to find a suitor and shut down in June 2015 (Galligan, 2015). I visited the New York office for a week, where I observed Anthony De Rosa, Circa's editor in chief.

- A social news site (referred to in this dissertation by the pseudonym "SportsPop") that publishes largely aggregated news and short opinion pieces on sports. SportsPop was founded in 2013 as an initiative of a major legacy U.S. news organization. The site is built around maximizing social sharing, publishing content on generally light subjects within sports and pop culture with attention-

grabbing headlines that resemble those of socially oriented sites such as Upworthy, the news site founded in 2012 and known primarily for producing "viral" content meant to be widely shared on social media.

As of February 2015, SportsPop had a full-time editorial staff of about 10, with several part-time contributors. Half of that staff works out of the organization's main office in a row of desks within the sports department's area of the newsroom. The other half works remotely, with several on the East Coast and one on the West Coast. Most of SportsPop's writers also produce reported pieces, some of them in longform, in addition to their primary work in aggregating news. These pieces occasionally appear in the organization's legacy outlet, though they are written primarily for SportsPop. Many of the organization's traditional sports reporters also contribute material to the site either occasionally or regularly, and the site is overseen by the sports editor of the parent news organization. SportsPop's business model is based on selling advertising and, as such, is built around attracting as much web traffic as possible, both to its own site and by extension to its parent site. I visited the news organization's offices to observe the SportsPop staff for a week in January and February 2015 that included Super Bowl Sunday.

- A video news aggregator (referred to in this dissertation by the pseudonym "VidNews") that produces short videos on daily news events using brief third-party video clips, motion graphics, and original narration. VidNews produces its own graphics and narration, but they are based on articles and video clips aggregated from other news organizations. The visual elements of the videos are composed primarily of aggregated video clips, photos, and screenshots of articles, as well as originally produced graphics, text, and anchor stand-ups. VidNews is a former startup now owned by a large media company, and its business model is based on a variety of partnerships and syndication deals, for which it is paid in flat

fees, rather than based on the amount of traffic their videos draw. VidNews produces videos for a variety of outlets — its own website and app, as well as numerous partners through syndication deals and contracts for regular custom-produced videos. VidNews both pitches news videos to some of those partners and is pitched ideas by them. The organization's videos cover a wide range of topics, centering on major U.S. and world news but also including business, tech, sports, and a heavy emphasis on pop culture and offbeat news, largely at the request of one of its major partners.

VidNews' offices are separate from its parent company's headquarters. The company had an editorial staff of about 35 full-time employees and about 20 to 25 part-time employees as of February 2015, nearly all of whom worked out of VidNews' offices. I visited the VidNews office for a week in February 2015.

The three sites were chosen primarily for variance along the two axes described above: Each represents a different level of orientation toward professional journalism (Circa was a three-year-old tech startup, staffed by writers with relatively little, though not zero, experience in professional journalism; SportsPop is a division of a major legacy professional news organization; and VidNews is a former startup now owned by a major media company and staffed primarily by young journalism school graduates). Each also works primarily within a different medium or narrative form (Circa was an app that launched a full web version shortly after my observation there; SportsPop is a website that exists primarily to draw traffic through search and social media sharing; and VidNews is produces aggregated videos for its website and app, as well as for a variety of syndicated partners). In the typology of aggregation outlined in Chapter 2 (see Figure 1 there), Circa and VidNews are in the re-created content/consensus judgment quadrant, while SportsPop is in the re-created content/idiosyncratic judgment quadrant. (All three tend toward re-created content in part because re-creation tends to involve more substantial work processes that are more easily captured through observation). In addition

to these dimensions of variance, the sites were selected based on the ability to secure access. I contacted seven organizations that varied along these axes to ask for permission to observe their aggregation operations on site, and Circa, SportsPop, and VidNews were the three that responded affirmatively; as I discuss later, those that declined generally did so out of a stated concern that my presence there would be disruptive. Of the four that rejected on-site observation, three later agreed to take part in the project via interviews, and one (*The New York Times*) allowed me a two-hour site visit to the aggregation operations (its NYT Now mobile app and Watching homepage news stream) within its newsroom.

Observation primarily consisted of sitting alongside various journalists at the three organizations as they searched for and produced stories and asking numerous questions about both their specific current tasks and their work more generally. VidNews was the most accommodating, allowing me to sit alongside ten journalists during my week there. By contrast, only editor-in-chief Anthony De Rosa regularly worked out of Circa's New York office, so he was the only one of their journalists I was able to observe. (I supplemented the data from that observation with numerous phone interviews with Circa editors, as will be discussed below; see Appendix A for details.) In only one case was I asked not to sit with anyone but to observe the newsroom more generally — during and immediately after the Super Bowl at SportsPop, since it was their busiest and highest-traffic period of the year. Otherwise, I spent virtually all of my newsroom observation seated alongside particular journalists. At VidNews, observation also included attending two staff meetings, one with editorial team leaders and the other with the entire staff. I took extensive field notes during observation and typed them up each night of fieldwork with separate analytical memos alongside.

All of the organizations made significant use of group chat and individual messaging programs for internal communications, which numerous recent newsroom ethnographers have noted makes it difficult to observe interpersonal interaction among

newsroom staff (Boczkowski, 2010; Puijk, 2008; Usher, 2014). I did not ask for direct access to such communication in any of three newsrooms, though I was often able to look over journalists' shoulders to see it unfold as they read it. (Because of our close proximity to each other, it was quite clear to them when I was doing this reading.) In some cases, I asked journalists what they and their colleagues were saying to each other, and they typically responded amiably either with a summary or an offer to see it for myself.

Interviews

Like the sites for participant observation, the interviews were selected largely for variance on the axes of orientation to professional journalism and medium or narrative form. The sampling for interviews began with the observation sites, as just more than half were with employees from the three organizations I observed, though many of those were conducted via phone after I left the field (see Appendix A for details). Within those sites, I interviewed those staffers who allowed me to sit with them and observe, as well as other employees that gatekeepers and others I met on site recommended as important informants to talk with. (At Circa and SportsPop, with their small staffs, that encompassed most of the full-time editorial staff; the role of their small and dispersed staffs on aggregators' working environment is discussed further in Chapter 8.) After those interviews were completed, I extended the sample out to include those working in aggregation with whom I had made a personal connection at some point, so as to improve my chances for access and candor. Most of those connections consisted of those whom I had either met at a professional gathering such as a conference or meetup, or the gatekeepers at those organizations that I had previously asked for (and had been denied) permission to observe their newsrooms.

Once those connections were exhausted, I turned to those with whom I had no relationship. To sample from among those, I started with a list of aggregation sites, apps, and teams I had been generating over the previous six months and organized them into categories reflecting their medium-specific, narrative, or topical distinctions (e.g.,

manually driven mobile apps, algorithmically driven apps, video aggregation, social news sites, specialized topics, and sports) as well as a label distinguishing aggregation operations affiliated with traditional professional news organizations. I then found as many editorial staffers as I could from each organization or team through "About Us" pages, bylined content, and searches of Google, social media, and LinkedIn. I sampled purposively from this list, choosing representatives from within each category to send interview requests, then adjusting new selections to maximize variance as those requests were accepted and declined. I focused on my core area of study within aggregation — manual forms of news-based aggregation, within and outside traditional news organizations — though managed to include a few edge cases, including two more algorithmically oriented apps and the editor of a news organization's email newsletter (which provides a daily digest of aggregated links to stories across the web), to lend the sample more breadth. Within each category and organization, I tended to sample those who would be likely to have on-the-ground knowledge of the aggregation work processes (which tended to rule out CEOs and presidents), and I often sampled those who would have enough autonomy to feel comfortable consenting to interview requests without getting the permission of one or several superiors. (There were several exceptions to this, however, in which I interviewed entry-level employees.) I wrapped up my sample as I began to achieve data saturation — that is, I began to hear the same observations and themes repeatedly with relatively little new insight — and had completed interviews with members of each of the major categories I had established among my two main axes.

The sample that resulted included 44 interviews (see Appendix A for a listing of each interview participant), conducted between January and March 2015. I requested interviews from a total of 64 people, making for a 69 percent response rate. Of those interviews, 26 were conducted with employees of the three organizations observed — some on site, some over the phone after the observation period, and others both on site and with follow-ups by phone — and the other 18 were conducted over the phone with

aggregation workers from a total of 14 other news organizations. Of the 44 interviews, 14 were conducted on the record — six of those on-the-record interviews were with Circa staffers — while the other 30 were conducted anonymously at the participants' request. Interviews typically lasted about 45 minutes to an hour and covered a wide range of questions on verifying information, evaluating sources, writing content, ethics, professional background and identity, and the skills and routines of aggregation. (For an outline of interview questions, see Appendix B.) Interviews were semi-structured; each interview included very similar broad questions in each of the areas laid out in the interview outline, but follow-up questions varied based on the responses of each individual and the particular characteristics of the aggregation operation being discussed. On-site interviews were less formally structured, as each category was generally covered, but the order and type of the questions flowed more organically from the work the participant was doing at the time. Phone interviews and some more focused in-person interviews were recorded and transcribed by the author, and in-person interviews that were part of on-site observation were included in field notes.

Data Analysis

The data was analyzed through the constant comparative method, alternating between emergent data from the field and existing theoretical concepts in an attempt to weave the two together (Corbin & Strauss, 2008). As I wrote up field notes each day during my participant observation, I made analytical and reflexive observations in separate memos (Hammersley & Atkinson, 2007; Tracy, 2013). I also made similar memos as I transcribed interviews, using the transcription process as a close first read of the interview data. As I moved into data analysis, I went through each day's field notes and interview transcripts systematically, tagging sections with categories and themes then grouping data with the same tags together in a word processing program (Scrivener) to view them together. Tags began with broad categories based on the literature (e.g., narrative, verification, evidence) as well as the general structure of my interviews (e.g.,

professional identity, audience perception, personal background). As data accumulated under each category, I re-read and evaluated the data to try to determine sub-categories or sub-themes it could be divided into, often comparing instances within those categories and writing an analytical memo on the sub-category or theme as I broke it out (Corbin & Strauss, 2008; Lindlof, 1995). To weave sub-categories together into a more coherent and theoretically fruitful whole, I consulted literature related to the categories to help elucidate connections between them or novel findings revealed in the data. In this way, I established a basic analytical pattern of moving from general categories of data to specific sub-categories and back to general theoretical integration, moving back and forth between the data and theory at each stage of this process in accordance with the constant comparative method (Hammersley & Atkinson, 2007; Lindlof, 1995). The overall process was similar to what I engaged in with the textual analysis for my previous research on WikiLeaks (Coddington, 2012b) in the process of grouping and sub-dividing data together into themes and sub-themes and piecing those sub-themes together into larger concepts, but this analysis broader and more systematic because of the greater amount of data and breadth of theoretical concepts involved.

HUMAN SUBJECTS AND CONFIDENTIALITY

I received approval for this research from the Institutional Review Board at the University of Texas at Austin in January 2015, before I began the participant observation and interviews. All of the participants in my on-site fieldwork received and signed an IRB-approved consent form giving their consent to participant in the study; the form allowed them to check a box indicating whether they would like their name to be used in any publications of the study (see Appendix C for consent forms). In two of the three observation sites (SportsPop and VidNews), organizational gatekeepers did not give me permission to use their organization's name in any publications; thus, any individual consent in those organizations to allow me to use an individual's name was superseded

by the organizational gatekeeper's request for anonymity, as use of an individual's name would have rendered the requests for organizational anonymity moot.

Phone interview participants received a modified consent form (see Appendix C) via email before the interview that did not include a checkbox or a signature line, as the phone interviews were determined by the IRB to be exempt from a written consent requirement. In phone interviews, I began by asking whether the participant would like to be named in any publications, then asked for permission to record the conversation. All participants allowed me to record the conversation, and 14 interview participants allowed me to use their names and conducted the interview on the record; six of them were Circa employees (see Appendix A). For those who did not give me permission to publish their name (or their organization's name), I have redacted any potentially identifying details in the text.

REFLEXIVE NOTE

Because in observation-based qualitative research, the researcher is the research instrument themselves (Hammersley & Atkinson, 2007), I have strived in this study to transparently and reflexively consider and account for my own role in the research process. On the whole, I found that participants responded to my inquiries and presence with a mixture of receptiveness and a bit of professional distance. I had some initial difficulties gaining access to sites for observation, though it was mostly due to a concern about my presence being disruptive, rather than any opposition to the study per se. I developed a way of explaining the impetus for my study that tended to be received well by gatekeepers and participants: I described the way aggregation has become ubiquitous throughout professional journalism despite the rhetoric against it in recent years, then noted that it's rarely taught or studied. My purpose, I explained, was to find out how the work of aggregation is done and determine what it has to do with the kind of work that journalists have traditionally done. Many of my interlocutors seemed to find this a genuinely interesting topic of study and expressed a desire to help with my research, but

several news organizations told me that my presence beyond a couple of hours would be too disruptive, given the speed with which they worked. As it was, I was able to use a personal connection to help gain access to only one of the three sites — one of the co-founders of SportsPop was an "Internet acquaintance" with whom I had exchanged several tweets and emails — but the other two were based on cold emails.

Once on site, I found myself fairly comfortable in the newsroom setting, though they varied widely. (SportsPop and VidNews felt more like traditional newsrooms, with rows of desks in an open floor plan, each desk equipped with large computer monitors. SportsPop's, as part of a legacy newsroom, most resembled the prototypical traditional newsroom, with a sea of desks stretching across a floor of a large office building. VidNews' newsroom, a converted radiologist's office, was much smaller, with a small area in front for recording anchors' newsroom standups. Circa was the least traditional, taking up just a single table in a Manhattan office it shared several tech startups, including a mobile messaging platform and a 3D modeling firm.) I had been a newspaper reporter for four years, and I found that experience very helpful in several ways. I needed very little time to adjust to rhythms of each newsroom and the overall milieu there; I had a familiarity with some of the basic jargon and concepts being employed and was thus able to ask deeper-level questions; and I gained rapport from some participants based on that professional background. In addition to my reporting background, my experience writing on the web for the Nieman Journalism Lab — on which, more details below — also proved helpful for me in quickly picking up the aspects of the work that might not have been familiar from my reporting days. Many of the people I observed were close to my own age, but a bit younger — I was 30 at the time of the observation, and many were in their mid to late 20s — and I think this was helpful as well in gaining rapport and understanding many of the cultural references than ran throughout their conversation.

The most difficult part of observation was in not having a specific task there other than observing and asking questions. I found it difficult at times to intently observe an

individual without being obtrusive. This was partly a function of self-consciousness and social awkwardness, but also a healthy awareness of the amount of work these journalists needed to do and the speed at which they needed to do it. I tried to observe quietly when their work got heavier and ask questions during down times, and that seemed to work well, though not universally. In one case, I saw a person I observed get admonished by his editor via chat program for turning in a story late while I was observing him. I had made a point not to ask him too many questions because of his deadline, but he had nonetheless been late because he had been talking to me, and I told him to blame me in his response to his editor. I gave myself some low-intensity reading tasks to work on in order to have something to do to avoid the awkward state of staring over my interlocutor's shoulder at their computer screen for hours on end, but because there was a significant amount of activity to observe and ask questions about, I worked on those tasks rarely at SportsPop and not at all during my time at VidNews.

I also tried to help out with basic tasks as I observed — using my own laptop to spot breaking news stories, tactfully pointing out copy errors, and suggesting headlines when a writer was stuck or asked me about an idea. But I generally found I wasn't much of a help; my interlocutors were much faster than I was at finding stories and had a much better knowledge of what kinds of stories and headlines worked for their publication than I did. (Though this difference did occasionally turn out to be useful for me, as I could ask about why particular stories were not of interest to them.)

The participants I observed, as well as the ones I interviewed, were often very accommodating and willing to answer my questions, but they also kept a professional distance and at times edged toward being guarded. Even though many of the aggregators I talked with were participating anonymously, it was difficult at times to get information that I felt I couldn't have gotten as a reporter writing an on-the-record feature story, though occasionally journalists would give what were clearly their candid thoughts on aspects of their work or their industry. During both observation and interviews,

participants occasionally asked me what I was studying or what I thought of their organization, and I answered as honestly as I could about strengths and weaknesses I perceived in their organization or aggregation work as a whole, with illuminating conversations sometimes resulting. More often, though, they asked in what form my work would be published, and who else I had observed or talked to.

The reflexivity and thoughtfulness of participants' responses varied somewhat; a few had never given much thought to many of the issues I asked about and seemed content to give me fairly minimal answers to probing questions. But most were able to insightfully articulate the justifications for their actions and decisions, and had clearly done some reflection on their professional principles and the reasons they worked the way they did. I encountered little arrogance or defensiveness about their work; more common, as I will discuss further in Chapter 8, was self-deprecation. I generally felt as though participants were being honest with me about the standards for their work and the degree to which they put those standards into practice, though I do think many of them also tried to put a good face on their work, emphasizing aspects or instances of it that I would find desirable.[14] The resulting picture they presented to me of aggregation may have been a bit sanguine, though I have done my best to critically approach the information they have given me.

I encountered a general nervousness among participants about going on the record or allowing their names to be used. In a couple of cases, the reason for that hesitancy was simple and easily explained; one participant hadn't cleared the interview with her company's public relations staff and had to conduct the interview anonymously unless she wanted to clear that rather onerous hurdle. But more often, I think the anxiety about allowing their names to be used stemmed from a wariness about how they and their work might be portrayed. Many of the participants were used to being thought of as doing an inferior form of journalistic work — many of them mentioned this at some point during

[14] As I note in Chapter 6, aggregators' descriptions of their use of phone calls to confirm information with official sources was a significant case of this phenomenon.

the interview, and some believed themselves that they were doing an inferior form of work — and I think they held some residual concern that I might not present them in a friendly light. (I didn't say anything to lead them to this belief, though I also didn't offer any assurances that I would treat them sympathetically, other than asserting to them that I believed aggregation was a worthy form of journalistic work to study.) Though no one explicitly explained their organization's rationale for its decision, I believe this was especially the case with the organizational decisions to keep their names out of the study — at SportsPop, VidNews, and a few places I interviewed. Despite their receptiveness to my work, they appeared to consider anonymity a much less risky route. It should be noted, however, that out of an ethical concern to avoid coercion, I didn't push any participants to go on the record, which contrasted widely with what I would have done had I been a reporter writing about them for a journalistic project. Absent any attempt at persuasion from me, then, the downside to anonymity may have seemed quite small for most participants, and the upside to being named relatively limited. At the organizations I observed, I was limited in only minor ways beyond the anonymity agreement: At VidNews, I agreed not to reveal details about the proprietary technology it uses to gather video footage, and at Circa, I agreed not to discuss its specific metrics numbers.

Finally, I should note my own professional background regarding aggregation, as it also influenced my assumptions and my analysis. I did a form of news aggregation for four years at the Nieman Journalism Lab, a journalism analysis site run by the Nieman Foundation at Harvard University. From 2010 until 2014, I wrote a weekly piece called "This Week in Review" that brought in a variety of sources to synthesize and summarize the news developments and ongoing conversation around the intersection of journalism, media, and technology. This work was part of what primed me to think carefully about aggregation as a form of newswork, and it did indeed influence my own normative beliefs regarding aggregation. My thoughts on what constitutes ethical attribution, what makes a source good to aggregate, and how to make aggregation most helpful for users

stem in part from how I answered those questions in practice as a working news aggregator. Once I began gathering data, however, I found that my experience in that area did not end up as intrusive an influence as I expected it to be. I did not encounter anyone who did aggregation in any form similar to my own previous work — a once-a-week piece that attempts to be a comprehensive, link-filled review of a specialized subject area — so I found relatively few points of comparison between my work and those of my interlocutors. Consequently, my experience did not influence my opinions of the aggregators I observed and talked to as much as I thought it might. My experience was helpful in identifying (and identifying with) some of the practical questions and ethical issues they faced, but the work of aggregation turned out to be so much more varied and richly textured than I expected that my own work hardly ended up serving as a template for the work I observed.

CONCLUSION

This study fits within the growing corpus of sociological studies of news production, many of which have been built on a combination of interviews and participant observation at multiple sites to examine elements of online journalism that cannot be adequately captured through an ethnography of a single site (e.g., Anderson, 2013a; Boczkowski, 2010; Boyer, 2013; Lewis & Usher, 2013; Ryfe, 2012). However, it diverges in two aspects: First, it involves less time in the field and a heavier reliance on interviews than many of these studies which could be characterized as newsroom ethnographies (Anderson, 2013; Boyer, 2013; Ryfe, 2012; Usher, 2014). This study lacks the cultural immersion and length of fieldwork to be considered an ethnography, but rather uses brief, focused periods of time in multiple field sites alongside interviews to illuminate a particular process of news production, similar to a few recent sociological studies of journalism (e.g., Bock, 2012b; Graves, 2013). Second, this study has as its object a particular journalistic *practice*, as opposed to a news organization (Usher, 2014), local news ecosystem (Anderson, 2013a; Robinson, 2011), or industry (Ryfe, 2012). This

focus on a practice that is applied across several news formats and industries necessitates a more horizontal approach that aims to gather a range of data across numerous settings rather than a deep dive into a single manifestation of this practice. In that sense, despite its limitation in the volume of observational data gathered, this study has been successful in gathering a breadth of data about aggregation as it is practiced in a variety of contexts while also punctuating that breadth with richer detail regarding the three particular cases of Circa, SportsPop, and VidNews. That data forms the foundation for the analysis of news aggregation norms and practices in the following chapters.

RESULTS

Chapter 6: Aggregation as Epistemological Practice

This chapter takes on the task of characterizing aggregation as a form of newswork at a basic level: What exactly do aggregators do? More specifically, this chapter addresses the questions of epistemology raised in Chapter 3 — the means by which aggregators construct news as a valid and factually reliable form of public knowledge. Specifically, I examine the way in which aggregators exercise news judgment to determine what information is newsworthy, how they understand and weigh various forms of evidence, and how they verify information and present it as valid and truthful to their audiences. In doing so, I situate aggregation in relation to both reporting and other forms of online news production as modes by which journalists validate and communicate information as representations of reality.

I find that aggregation is indeed a form of second-order newswork, as Anderson (2013a) has described it, building its epistemological standards and values around those of professional news reporting but operating at a remove from the objects on which it builds its news accounts. This distance creates a layer of epistemological uncertainty within aggregation beyond that of reporting, and aggregators negotiate that uncertainty continually through careful textual presentation and attempts to align themselves with the work of reporting. The result is a form of work that has deeply absorbed the knowledge-building principles of modern professional journalism, but is profoundly constrained and contingent on the work of others in its ability to enact those principles. I have divided the epistemological exploration of news aggregation in this chapter into three sections, roughly corresponding with three stages of the process of aggregation work: First, the construction of newsworthiness and news value; second, the process of evaluating and incorporating sources of evidence; and finally, the process of verifying information and presenting it to an audience.

CONSTRUCTING NEWSWORTHINESS

The first step in aggregators and other journalists' construction of news is the means by which they select particular events, situations, and phenomena out of the endless stream of occurrences in the social world and construe them as news events worthy of broad public awareness. In this process, aggregators are guided by two inherently contradictory principles: They have internalized traditional media's standards for newsworthiness and actively strive to emulate them, but they also place a priority on determining and satisfying minute-to-minute audience demands for content on particular subjects, and being the first to do so. This tension manifests itself among aggregators in a vacillation between publishing stories because other major news organizations are doing so and trying to be the first to publish something on a potentially popular subject, and it mirrors the ongoing struggle of journalists between professional news judgment and algorithmically constructed audience demand (Anderson, 2011b; Lee et al., 2014). This tension is magnified for aggregators, however, because their work inherently relies on the published accounts of others, so largely lack the ability journalists have long possessed to singlehandedly introduce events and developments to the public realm. This lack of epistemological autonomy results in a conception of newsworthiness that is heavily constrained by both the standards and decisions of traditional professional journalism and the fluctuating desires of a quantifiable but unpredictable audience.

Routines of News Discovery

Aggregators often described their routines for discovering stories as idiosyncratic and personal, but those routines actually tended to be fairly similar. At each of the three sites observed, aggregators searched for news by fairly regularly checking a set of top news sites such as *The New York Times*, CNN, the BBC, and Google News (at SportsPop, of course, these sites were top sports sites rather than general news sites) along with a near-constant presence on Twitter, typically through Twitter's web application, TweetDeck, which formed a wall of continually cascading Twitter feeds across the

computer monitors installed at each journalist's desk. In interviews, several aggregators described variations on that theme — a few regularly trawled particular Reddit communities, and one sports writer went through an alphabetical bookmarked list of each Major League Baseball team's local beat writers each morning — but the general contours of the news search process were largely uniform.

Specifically, Twitter via TweetDeck was the primary means by which aggregators encountered news. Some of them reduced their description of the process by which they looked for stories as essentially "camping out on TweetDeck all day." Said one writer for a national sports site: "TweetDeck is the gold standard in terms of where we're looking. I mean Twitter, but specifically that application. No question. And that's, like, the whole day. My eyes start to get cross-eyed after about four or five hours, I see things. I'm sure that's not unique in any way." Twitter is preferred first and foremost for its speed, but also for the immense range it can give: Custom lists on TweetDeck allow aggregators to develop a wide-ranging but carefully categorized news net that can bring news from all geographical and social corners of the world (or at least the web) in a constantly updating format.[15] The continual flow of Twitter and TweetDeck help reinforce a sense of relentless urgency, of constant "next-ness" (Boyer, 2013, p. 69) that elevates timeliness as a condition of newsworthiness, as well as an orientation toward the news values expressed by the prominent news organizations and professional journalists who dominate aggregators' feeds.

Audience Perception and News Judgment Constraints

While the news discovery routine of browsing top news sites and scrolling through TweetDeck is primarily meant to capture the most recent news as determined by the vanguard of professional journalism, aggregators are also driven by the desire to satisfy what they perceive as audiences' demands. Unlike in past generations of

[15] For sports and pop culture aggregators in particular, Twitter is also itself a significant originator of newsworthy events, as athletes and celebrities post announcements, jokes, and images there.

journalism, this idea of audience demands is not conceived in some vague, populist, and idealized vision of the audience, but essentially translates to minute-by-minute quantitative data on what people online are clicking on and talking about. Likewise, aggregators do not attempt to justify the purpose of meeting these demands in any high-minded democratic sense, but simply explain it as part of their attempt to "reach as many people as possible" or be "part of the conversation" on an issue — in other words, to draw as much traffic as possible. To that end, aggregators are relying on a slew of algorithmic tools such as CrowdTangle, Dataminr, and NewsWhip, along with internally built alternatives, that crawl social networks and retrieved data to determine which stories and issues are attracting an inordinate amount of clicks and chatter across social networks (for more information on these tools, see Fitts, 2015).

The problem with relying on such signals is that as fast as they are, they involve an inevitable lag; they only identify stories on which someone else has already begun reaping the benefits of an emerging tide of online attention. To respond to that data would be to merely pile on along with everyone else acting on the same information, clamoring with numerous others for smaller and smaller waves of interest as the tide begins to ebb. The goal, then, as one VidNews producer put it, is to "get ahead of that curve to see what people aren't talking about yet" — an enterprise for which even the most sophisticated quantitative data becomes much less valuable. Aggregators have a few ways to find indicators of what might be popular soon — combing through particular subgroups and threads on the sprawling social news site Reddit was a particular favorite — but this conundrum represents an important constraint on the role of quantitative audience-based influences on news judgment. To determine what news stories might be most interesting to the greatest number of people, aggregators ultimately must fall back on a personalized and professionalized news judgment that relies on a "gut feeling" and "what interests me as a person" more than anything else, but that is still hemmed in by an orientation toward the audience as the primary determinant of what constitutes news worthy of public

dissemination. Ultimately, aggregators place themselves as a surrogate for the audience, transposing their own news judgment for the audience's preferences and vice versa, just as journalists have for decades (Darnton, 1975; Gans, 1979). Thus, while ostensibly orienting themselves around the audience, aggregators construct a remarkably thin role for that audience in the news process. It is one devoid of active participation beyond relatively thoughtless sharing, and one in which even the audience's perceived characteristics and preferences are simply a combination of algorithmic data and the aggregator's own projected desires.

Like other forms of online journalism, news judgment in aggregation is constrained by the desire for clicks and a deferral to the audience (Anderson, 2011a; Lee et al., 2014; Usher, 2014), but beyond this constraint, the lag in audience measurement tools and the desire to be first to take a story viral often push aggregators toward an informal, personally centered understanding of their audience. This is a key paradox for both aggregators' conception of newsworthiness and journalists' construction of the audience more broadly, as it indicates the insufficiency of algorithmic conceptions of the audience despite their prevalence within the profession, as well as the obduracy of a personalized and self-oriented vision of the audience.

Convergence of News Judgment

In addition to being constrained by a particular "algorithmic-personal" vision of the audience, aggregators' news judgment is also shaped by the secondhand nature of their work. They often browsed the websites of leading professional news organizations not only as fodder for potential stories, but as a touchstone against which to measure their own news judgment. At Circa, editor-in-chief Anthony De Rosa said he tried to periodically step away from moment-to-moment editing duties to check the app's overall coverage of the major stories of the day, examining Circa's story list against the top stories on major news sites. "I usually feel like we've done a good job if I can look at the front page of the newspaper the next day or watch the national newscast, and I look at

what they're reporting, and we've covered all their stories," De Rosa said. The practice of checking one's news mix against those of the competition is not a new one, of course, but the relationship of Circa and the other aggregators to the news organizations against which they are comparing their news judgment makes the practice substantially different: The aggregators are also reliant on these organizations for the material for their content, which makes them more fundamentally dependent on those organizations' news judgment. As the news content is passed from traditional news organizations to aggregators, the news judgment employed to recognize the events as news and signal them as important to the public is passed on alongside it, similar to the homogenization via monitoring observed by Boczkowski (2010).

This borrowing of news judgment often results in a news agenda that mirrors that of the top traditional news organizations and — thanks to the employment of similar tools and conceptions to represent the desires of the audience — a convergence of news subjects among aggregators as well. At times, this uniformity irked aggregators, as one SportsPop writer expressed:

> It's this weird echo chamber. Everybody's got the same stories. If I see something first, and then I write about it, then I'll notice, whether it's because I put it out there or it's because of these people all seeing the same thing, everybody else has it soon. And [when] everybody else has something, I say, 'Ah, I should probably get on that.'

But many of them had also naturalized the widely covered stories as either the product of common-sense news judgment — something all news organizations needed to cover in order to be recognized as legitimate journalistic enterprises — or, in the case of heavily audience-driven stories, as "what everyone is talking about." As one editor at a national news organization put it, "That online conversation is happening with or without us, and we'd rather it be with us than without us."

These two constraints of aggregators' news judgment — the judgment of the news organizations on which they rely and the ever-shifting demands of audiences — create a continual tension that colors the milieu in which aggregators understand events as news. After all, the top stories according to traditional standards of newsworthiness do not always overlap with the stories gathering the greatest share of social traffic, and an organization's news production practices and professional perception can diverge greatly based on which of these stories they emphasize. (Circa, with its no-nonsense summaries of global market developments, and SportsPop, with its animated GIFs of the latest athletic mishaps, are good examples of the degree of that divergence.) Other journalists have some ability to relieve this tension by originating stories that they believe hold great news value according to one or the other of these standards. But aggregators are constrained by their limited ability to develop a new story and introduce it to the news agenda; by the reactive nature of their work, they have less autonomy to determine what news is. Aggregators attempt to develop some professional distinction within this limited autonomy primarily by striving to deliver traditionally newsworthy stories as quickly as possible and to present more audience-driven stories as creatively as possible, by incorporating social media, multimedia, humor, or distinctive opinions. Still, the limited epistemological space in which to express this judgment results in a sense of newsworthiness that quickly converges among aggregators just as it does among traditional journalists, even if the two groups' conceptions don't always directly align. Because aggregators' work is fundamentally secondary, drafting off the news judgment of their sources, and because it relies so heavily on an algorithmically constructed conception of their audience, aggregators' judgment of newsworthiness is constrained even more deeply than journalists' news judgment has been historically, resulting in substantial homogeneity in news judgment among them.

EVALUATING AND USING SOURCES

Just as their news judgment is derived in part from that of traditional journalists, aggregators' sources for their news largely come from traditional media, and their criteria for evaluating sources of evidence — both published and unpublished — largely mirror those of professional journalism as a whole. Specifically, aggregators are examining their sources for evidence of reporting, building their own evidence-gathering practices as appendages to the core modern journalistic evidence-gathering practice of reporting. In this section, I will illustrate this practice through an example drawn from a VidNews producer's process of validating information about a single international news story, which indicates what a tortuous procedure uncovering and parsing evidence of reporting can be. Then, I will describe the means of technologically enabled presence through video and social media by which aggregators are gaining greater access to the evidentiary sources once privy to reporting.

Aggregation Sources and Traditional Media

In many cases, aggregators' beliefs about which sources are most credible closely match the hierarchy professional journalists as a whole map onto their field: Wire services and major national/international news organizations like *The New York Times*, *The Wall Street Journal*, and the BBC are at the top, with venerable regional newspapers slotting in just below them. While most aggregators asserted that they approach every story with skepticism, in practice, these organizations' reputation earns them a reprieve from the closest scrutiny. The approach of a breaking news reporter[16] at a national news organization was fairly typical: "Places like the *Dallas Morning News*, the *LA Times*, *Chicago Tribune*, *New York Times*, *Boston Globe*, these are newspapers that have been around forever. They are generally trustworthy on the first pass."

[16] "Breaking news reporter" was a fairly common job title for a journalist whose work consisted primarily of aggregating breaking news published elsewhere online and adding confirmatory reporting (discussed later in this chapter). Though reporting is in the job title, the breaking news reporter's work more closely resembles aggregation than traditional reporting.

This trust is based on several factors: The news organizations' institutional history and weight built up over time, as this aggregator alluded to, as well as their reporting staff and resources — a factor I will address more fully later in this chapter. But beyond that, aggregators tend to develop mental inventories of news organizations' and journalists' recent track records for accuracy. This is a natural part of monitoring the journalistic field for all journalists, as well as some of the more media-literate public. But aggregators' inventories tend to be more detailed and crucial because of their near-constant consumption of other media sources and because those sources' credibility are so important for their own. This mental index of accuracy was often the heaviest factor in aggregators' willingness to use sources, though it was not always the only one. (TMZ was a notable exception in this area; it was mentioned more times than any other organization as a source aggregators never used, even though a couple of them acknowledged its track record for accuracy was actually quite good. The aversion to TMZ was driven instead by its penchant for anonymous sources and its reputation as trading primarily in celebrity gossip.) In addition, aggregators evaluated whether the topic was one that a source might be expected to report on authoritatively, based on its typical geographical and topical sphere of coverage. A local newspaper in Indiana, for example, might be considered credible covering a political scandal involving its governor, but not one involving the Secret Service.

Aggregators' criteria for evaluating sources' credibility were heavily borrowed from traditional professional journalism, just as the sources they cited also came overwhelmingly from that realm. Some aggregators described their criteria as simply the same as what any journalist would use: "It's not really too complicated. It's just what you would expect," said one, and another described his preferred sources as, "mostly, it's the ones that anybody would consider reputable, right? So large, long-established news organizations." In many cases, including both of these, the aggregators were employed by professional news organizations, so their alignment with traditional professional

journalistic values is not surprising. And while most aggregators expressed a strong preference for traditional news sources, some indicated their openness to sources outside professional journalism. A news director at VidNews described a source evaluation process intended to include non-traditional sources, though with additional scrutiny:

> We want a blog to be able to stand on the same platform as the BBC, you know. Just because it doesn't have millions of dollars of funding, if someone has gone and done this reporting and figured it out, we want to be able to put it out there. So we don't dismiss something just because it's a junky-looking web design, or something we haven't ever heard of immediately. Now, do we enter into that skeptically? Absolutely.

As a practical matter, however, non-traditional sources such as blogs seem to be rarely cited: With only one exception, I saw no sources outside professional media or official governmental, business, or education websites — or the social media posts of officials and professional journalists — cited in any stories at any of the field sites I observed.

That one exception was social media posts, which presented a telling conundrum for many aggregators. Social media often appears as a natural source for aggregators, given the amount of time they spend on Twitter and its prominence as a source for discovering news stories. But the ephemerality, open structure, and immense speed of news on Twitter can make it difficult for aggregators to grant it the credibility that they attribute to published news stories. Aggregators are more inclined to trust and cite professional journalists' Twitter posts than other users; even BuzzFeed's Jim Dalrymple II, who was far more open to including social media posts in aggregation of breaking news than other aggregators, said he prefers to cite journalists' posts, using a story he wrote on a fire in Dubai as an example:

> We give a lot more weight to journalists. So if you're a reporter in Dubai versus just some person, we're almost always going to choose the reporter to include in the story versus the regular person. … And so it was kind of like, 'All right, well,

> these people have a reputation for being reliable, and here they are — maybe they're verified by Twitter, or maybe they have bylines in reputable sources or something like that.' So in a case like that, we're sort of looking at the types of people sharing information and going with the ones who sort of have a professional obligation to be correct.

That "professional obligation to be correct" implicit among journalists carries great weight among aggregators on social media and elsewhere — not completely obviating the need for verification, but significantly reducing the skepticism with which they view the content.

Despite the general trust aggregators have in the work of professional journalists, there is one group of sources that they consider even more reliable and authoritative: Officials. Official sources were referred to as the most reliable general type of source for some of the same reasons researchers have found for decades that journalists remain heavily reliant on official sources — they're convenient, they have access to information that journalists lack, and their statements have the power to enact realities, rather than simply reflect them (Cook, 1998; Fishman, 1980; Gans, 1979; Tuchman, 1978). But beyond that, official sources serve an additional purpose for aggregators: They are primary sources, eliminating the need for another journalist to serve as a go-between. When an aggregator cites an official source — particularly through a medium the aggregator accessed directly, such as a released statement, a social media post, or a recorded press conference — the aggregator is accessing the source in the same way that a reporter might, bringing them one degree closer to the information they're communicating and eliminating the need to invest their own credibility in the report of another journalist. For this reason, some aggregators — and Circa in particular — treated primary sources and official sources as interchangeable. Circa deputy editor Evan Buxbaum captured well this close tie between primary and official sources and the advantage that access to official sources gives his organization:

> Sometimes you're beholden to official press releases and press conferences or statements from organizations, law enforcement, you know. And that's the ultimate gatekeeper of that information, so you have to rely on official sources. And nowadays, we have the same access through various screening options to watch press conferences as they happen, like anyone else. That obviously is from the mouth of the guy. That's as primary of a source as you can get.

Buxbaum's statement also captures the ambivalence of aggregators' attitudes about this arrangement: He is not enthusiastic about being "beholden" to official sources whose messages he would rather not relay uncritically, but their ability to allow him to bypass other journalists as gatekeepers of information trumps his concern about excessive reliance on those officials' accounts. In the aggregator's hierarchy of sources, traditional media sources rank as more reliable than non-traditional ones, but aggregators would prefer to not have to rely on a media report at all, and for them, the way to achieve that is to cite an official source.

Searching for Credible Sources: An Example from VidNews

An example from VidNews is instructive in illuminating the difficulties aggregators can encounter in finding sources with information they deem credible, as well as the techniques they use to root out those sources. On one morning during my observation there in February 2015, a VidNews producer named Sean[17] was assigned a story about reports of Jordanian airstrikes against the Islamic State, or ISIS, in retaliation for ISIS' execution of a Jordanian pilot days earlier. Reports of the airstrikes have first been spotted on Twitter by a VidNews social media editor working in a glassed-in area in the back of VidNews' small newsroom, a converted radiology office. Sean's editor, who, like Sean, dresses casually in a short-sleeve button-down shirt and jeans (his editor also wears a baseball cap), gets word from the social media editor via Google Chat. He is

[17] Sean is a fictional name.

sitting in a desk across from Sean but assigns him the story via Google Chat at about 7:45 a.m. with a link to a brief *USA Today* article on the airstrikes.

Starting a story with a reliable professional media source like *USA Today* is a promising beginning for Sean, but the work of verifying the report becomes more complex when he reads the story and realizes it's based on a report in the English-language newspaper *The Jordan Times*. He clicks on the link, scans the *Times*' story, and sees that it, in turn, cites only Jordanian state TV as its source for news of the airstrikes. Sean has no way to access Jordanian state TV to assess its report for himself, so he starts over with a search on Google News.

The Google News search results point up a problem that will become increasingly cumbersome for Sean as he looks for a reliable source to cite in his story: VidNews does not subscribe to any wire services, so he cannot cite any reporting by The Associated Press, Reuters, or Agence France-Presse in his piece.[18] As he clicks on the results from his Google News search, they each become an increasingly exasperating parade of dead-ends as soon as he scrolls down to see the byline on the article. *Los Angeles Times*? It's an AP article. "I can't use any of it," he sighs. *The New York Times*? AP. *Haaretz*? Reuters. *Christian Science Monitor*? AP. Sean doesn't even bother clicking on the *Kansas City Star* link: "You look at the *Kansas City Star*, and it's like, 'Noooooooo.' I mean, it could be, but — noooooooo." CNN has its own story, but it, like *The Jordan Times*, is citing Jordanian state TV. Frustrated, Sean tries other sources that have been useful in the past: Radio Free Europe, an alternative Jordanian TV network named Jordan Days, a network of freelance correspondents called Middle East Eye. None of them have anything on the airstrikes.

[18] Publishers that do not subscribe to wire services are legally restricted from reproducing their content in their stories, something those wire services have been litigious about regarding aggregators in the past (e.g., Ardia, 2008; Isbell, 2010; Weaver, 2012). Legal precedent does not necessarily entail that VidNews is prohibited from citing and linking to wire services, though as I will discuss in Chapter 8, VidNews tended to be quite conservative about potential legal violations in its aggregation work. VidNews' editor explained that the organization does not cite wire services' quotes or exclusive facts because those organizations charge for their text and their reporting and VidNews does not pay for access to those services, even if they are publicly posted by other subscribers.

Finally, Sean stumbles onto a bylined article on the English-language website of the pan-Arab TV network Al Arabiya. This story is longer, cites a government spokesman on the strikes, and has a death count — 55. It's very little information, but finally, it's something he can use. He shifts to look for a quote he can superimpose as text over an image to lead off his story. *USA Today* has a quote from Jordan's king, citing the state's official news agency, Petra, but Petra's site is down. As he continues to refresh the site, Sean shifts back to the Al Arabiya article to give it a closer read. When he does, he's dismayed: Al Arabiya's information from the government spokesman is actually attributed to an AFP article, which is off-limits to him, and its death count is attributed only to "Iraqi media." "Ugh, that's annoying," says Sean. "I just want a nice source that says, 'Hey, this is exactly what happened.'"

Sean heads back to Google News for a second time, and the procession of wire copy continues. A Voice of America article is Reuters copy. *The Wall Street Journal*'s is from the AP. *USA Today* has an updated article with some video footage, but it's from Reuters. He now has 32 tabs open on his computer and has been searching for a usable source for nearly an hour, and all he has is the *Jordan Times* story. He tries to write a couple of paragraphs based on that article, but stops when he starts a sentence, "The Jordan Times cites media reports which say…" He laughs and shakes his head. "You're going through two sources right there." Running out of options, Sean checks a Twitter list he has open on TweetDeck with Middle East reporters, bloggers, and experts. He sees people talking about the airstrikes, but nothing he can cite. "Unless they're actually there or something, I think the likelihood that I'm going to be able to use it is pretty low. I mean, unless they're like, 'Hey, I'm reporting from Raqqa,'" he says, referring to ISIS' de facto capital in Syria.

While he looks through Twitter, I notice on one of the newsroom's overhead TVs that CNN is talking to one of its reporters in Jordan via satellite, with Jordan's airstrikes on the chyron crawling across the bottom of the screen. I point it out to Sean, and he pulls

up a feed on his computer and plugs in his headphones. After a few seconds, he exclaims, "There you go. She just said Raqqa." Now, he says, he can attribute both the occurrence of the strikes and their location to CNN, rather than *The Jordan Times*' secondhand reports. He goes back to his draft of the story, replacing the *Times* article with attributions and links to CNN. "It's just 'media reports,'" he says of the *Times* article. "They don't have any reportage." With that information finally secured — at 9:15 a.m., an hour and a half after he was assigned the story — he begins to pull together the rest of the story, using a story from the BBC to attribute a statement by Jordan's King Abdullah II, articles from *The Washington Post* and *National Journal* to add commentary, and finding video through file footage collected from Jordanian state TV, ISIS, the U.S. Air Force and Navy, and the BBC.

When he is finished writing his script and pulling together footage sources, Sean hands off his script to another editor, who reviews it and passes it on to a producer who assembles the visual elements. The final video, just under two minutes long, opens with 10-second clips of fighter jets from the U.S. Air Force and Jordanian state TV, with words like "EARTH-SHATTERING" and "RAQQA, SYRIA" superimposed in large letters for emphasis as the anchor reads them in voiceover. It quickly shifts to other sources of file footage: ISIS tanks rolling down a street, grainy video of airstrikes from U.S. Central Command, more fighter jets taking off in U.S. Navy video, protesting Jordanians via French television. As the anchor quotes from Jordan's King Abdullah II, Jordanian state TV footage of his recent public address is shown. The video's anchor, who first appears about 50 seconds in, is a female VidNews editor based in another city, with camera-ready wardrobe and makeup typical of most local TV news. (The anchors, both male and female, are instantly distinguishable from off-camera staff like Sean in VidNews' newsroom by their comparatively fastidious dress, hair, and makeup.) The video's audio consists entirely of the anchor's narration with the exception of one BBC clip of a translator's voice quoting the father of the deceased pilot. The video is a hybrid

of traditional TV news forms (B-roll from international TV networks and government video sources, a script written and delivered in the relatively formal style of TV news) and web video conventions (large text superimposed on screen for emphasis, studio-recorded audio in lieu of natural sound), bringing both together in a mostly sterile, straightforward product.

The scramble for even the smallest drops of information from Jordan and Syria was a bit worse than usual for Sean on this story, but it was fairly typical of what he faces while producing stories from that part of the world. As one of VidNews' specialists in news from the Middle East, much of Sean's time at work consists of those sorts of desperate searches for any sources that he can put some trust in and legally cite in his story. He acknowledges that it's possible to simply cite a generally reputable source that gives a secondhand report of the news he's covering, like *The Jordan Times* in this case. But with that source simply citing another one, he says he's not actually doing any of the work of uncovering the roots of this story for his viewers. "There's news everywhere. So just because CNN has it doesn't mean you stop there. You can continue searching for the original source," he says. He compares a news story to series of layers: A lot of attention and attribution often builds up around one layer — often a prominent traditional news organization like CNN, in international news — but when he starts picking at that layer, he finds it's simply building on the work of another layer, another source to the story. "You have to dig beneath that layer and get to the bottom," he says. "And at the very bottom is the original reporting."

Evidence of Reporting

Sean's layer analogy helps illuminate the nature of the work he did in researching and aggregating the reports of the airstrikes. In evaluating the sources he encountered, this was essentially his sole criteria: He was examining them for evidence of reporting. In reading the sources' accounts, he was looking for indications that they had interviewed the officials involved, or that they had observed some aspect of the events in question —

the airstrikes themselves, the aftermath in Raqqa, the planes returning to Jordan. Other than the wire services that he was unable to use, what he found instead of evidence of reporting were sources that were doing the same thing he was doing — aggregating information from other published or broadcast sources. And regardless of how good those sources were, if they were aggregated, they were insufficient to document and verify those events.

Many of the aggregators I observed and interviewed viewed their work in similar terms as Sean, even if they did not articulate it in his analogy. They characterized their work around a belief that every story is built on a base layer of some original reporting work by someone — observation, interviews, accessing and interpreting documents — and the aggregator's job is to bring their audience as close as they possibly can to that reporting. "You can tell when people are doing original reporting," Sean said at one point during his search for sources. "You have to boil it down to who got there first." That work of determining "who get there first" and boiling an account down to what those sources gathered through their reporting work is a crucial skill in aggregation work, and one that positions it firmly as a secondary epistemological form built on reporting.

For all the discussion of accuracy over time, this is the root of the reason aggregators prefer traditional professional news sources — because they are the organizations with resources to provide the reporting aggregators seek after so ardently. As the news editor at a social news site said when asked about why he preferred traditional media sources: "I think it is because they're more likely to have reporters on the ground. But at the same time, if I see a story reported by somewhere else, and I can tell clearly from the story the way it's written, the way it's reported, that it is a firsthand report and a firsthand account, I am more likely to trust it." Even outside of traditional journalism, what aggregators are looking for is evidence of reporting; recall the VidNews news director's explanation of why he is open to non-traditional sources: "We want a blog to be able to stand on the same platform as the BBC, you know. Just because it

doesn't have millions of dollars of funding, *if someone has gone and done this reporting and figured it out*, we want to be able to put it out there" (emphasis added). Those outside the mainstream of professional journalism are considered valuable and reliable by aggregators to the extent that they engage in journalism's central professional activity — reporting.

This value of reporting at the root of aggregation was embedded in some of the other language that aggregators used to describe their sources: Several interviewees talked about the importance of stories that are "well sourced" or their skepticism of stories with "unclear sourcing"; those phrases refer to the visibility of the evidence of reporting in those stories, the extent to which the reader can see the amount and type of reporting that went into them. Several of Circa's editors spoke of the organization's newsgathering goal as being "to try to get to the primary source as much as possible," as editor-in-chief Anthony De Rosa put it. He defined primary sources as an eyewitness, a document, or an official source that Circa called directly, which matches the epistemological definition of reporting almost exactly. Organizations that rely heavily on social media to report breaking news events apply this principle as well as they are, as BuzzFeed's Jim Dalrymple II put it, "mostly just looking in for people who were actually at the scene of whatever was happening" — in other words, people who can report on events through eyewitness observation via their physical proximity.

Aggregators determine the presence and type of reporting in the accounts they encounter in two main ways, often used in combination. The most common is to examine the texts of those stories, either written or visual, for evidence of reporting methods. The attribution of information is crucial in these cases: If information is not attributed to another news organization, the reporting remains ambiguous — it could have been obtained via interview, or the author could simply be improperly attributing information gathered from others. Language that makes an interview more explicit, such as "John Smith told the *Herald*" or "John Smith said in an interview," bears more evidence of

reporting, and named sources rather than anonymous ones also render the reporting process more visible. Likewise, language physically describing an event or otherwise indicating physical presence, including datelines, can be valuable evidence of a reporter's proximity to an event. Presence and evidence of reporting are much easier to establish in visual accounts, through video footage and remote reports (Zelizer, 1990b).

The second method of determining evidence of reporting involves a variant of the sort of mental inventory of an organization's track record described earlier: A continually updating mental index of which organizations have done reporting in which geographical and topical areas in the past. In foreign news, this can mean developing a map of which organizations have correspondents in various parts of the world; in tech news, it can entail taking note of which organizations have well-placed sources in particular tech companies. VidNews' Sean explained how he uses this process in evaluating foreign news:

> You start going to some sources and you see that they're just reporting from somebody else a lot of the time. Or you go to a source and you see that it's pretty much always an AP article. … I mean, you can tell they're not doing — they don't have, like, a correspondent out there or something. … So you can kind of find the guys that either they publish a story, then everybody publishes a story after them, or they publish a story and they're able to add to it because they have a correspondent there. And then once you get an idea of those in your head, you kind of just start gravitating toward those each time you start a story in that area.

Aggregators, then, look both within the text of an account and beyond it to the organization's history of reporting to evaluate the likelihood and degree to which the account was based on reporting.

As we have seen through Sean's ordeal, this task of gathering information based on evidence of reporting has become much more difficult in particular cases because of the dearth of firsthand reporting. Aside from the wire services, the only news

organizations that Sean could find who were present in some form to observe or report on Jordan's airstrikes were Jordanian state TV, unnamed Iraqi media, and a CNN correspondent. Other aggregators also lamented the paucity of foreign reporting from which to draw, noting that even professional news organizations covering areas with freelance reporting are often "relying on people that don't work for them, or they don't have direct contact with. It's like second- or third-hand sources," according to Circa's Anthony De Rosa.[19] This lack of firsthand observation and reported presence renders the work of detecting evidence of reporting both more crucial for aggregators and far more uncertain and contingent on the work of others.

Technological Presence and Proximity to Reporting

At the same time that evidence of reporting is becoming more difficult to find in distant locales, aggregators are becoming more capable of gathering their own evidence directly from newsmakers, bridging the distance between themselves and firsthand reporting through technologically enabled forms of presence. Several aggregators described making use of live video feeds of press conferences — either online or on cable news channels — to gather information directly from official sources at the same time as reporters present in the room. Likewise, the use of social media by law enforcement and political sources to post statements and update information gives aggregators access to those official sources at the same time and in the same way as reporters.

This both constrains and enhances the nature of the aggregators' sources. It further restricts aggregators to a narrow band of official sources on which they are already heavily reliant, constraining the range of sources from which they gather information. But the aggregators themselves saw as much more of an enhancement of the quality of their sources. For them, this equality in access played a major role in their ability to close the gap between their own work at the firsthand evidence gathered

[19] It is worth noting, however, that aggregators pointed out that several areas are flush with reporting, such that any significant occurrence is reported immediately by numerous journalists. Congressional actions and votes, major political campaigns, and major sports leagues, such as the NFL, were named as examples of these heavily reported areas.

through reporting, thus improving their own certainty about the veracity of their information. Circa senior editor Daniel Bentley described the similarity this way: "In terms of newsgathering, we're looking at the same sources of information as most desk journalists are. We're seeing the wires, we're seeing press releases, we're seeing statements, we're seeing tweets. So we might not have someone in a press conference, but most press conferences are televised anyway." In eliminating the reporter as middleman, aggregators are given the same sort of confidence in the veracity of their work as reporters are in theirs. This was the primary advantage that Craig Calcaterra, editor of NBC Sports' Hardball Talk baseball blog, ascribed to official sources posting of news on their social media accounts: "There's something a little bit more satisfying about it coming from a primary source in that, if there ever was any doubt at all in the report, you know it's not doubtful now that it's coming directly from, say, the Boston Red Sox." As aggregators see it, this technologically afforded presence puts them on the same epistemological footing with the reporters they typically aggregate, lending their accounts valued verisimilitude otherwise available only to those reporters.

SportsPop's writers used live streams to enable this type of presence twice during my observation there, as its writers covered Super Bowl week press conferences by halftime performer Katy Perry and NFL player Marshawn Lynch that aired live on cable TV. In both cases, the live stream allowed SportsPop to post one of the first articles on the press conference, within about 15 minutes of its conclusion. But in both cases, the presence afforded by the live video was incomplete; the writers had to search Twitter for transcripts or quotes posted by reporters who were present in order to determine the wording of statements they had not caught clearly on the video feed. Still, the access to these press conference streams is a valuable conduit for proximity for aggregators, compressing the distance between themselves and the sources from they gather information, and blurring the boundaries between their work and reporters'. Circa deputy

editor Evan Buxbaum aptly described this sense of remote reportorial presence enabled by these video feeds:

> I can't tell you how many times I've felt very connected to stories that I'm — I'm in Seattle right now — and I'm 3,000 miles away in my little corner of the country, and I'm watching the same information and getting the same information as if I were feverishly writing on a notepad and trying to make phone calls, or whatever. It's just kind of a different approach to information-gathering, I guess. But I don't think it's any less effective.

For a form of work as removed from its sources of evidence as aggregation is, that feeling of connection to stories is distinct and significant, a tangible marker of both similarity to reporters (who presumably engage in this sort of work on virtually daily basis) and of one's proximity to the information being gathered, and a valuable assurance of its probable veracity. The use of these technologically mediated forms of direct access to sources not only closes the gap between their access at that of reporters, but it also means that their most valued sources of evidence are also available to virtually anyone in the public. Still, their work in sifting through these sources and piecing them together with other forms of evidence differentiates them from much of that public, who may have access to that evidence, but are rarely seeking to consciously pull it together into accounts for others' consumption.[20]

VERIFYING AND PRESENTING INFORMATION

Speed and the Decision to Verify

After selecting and constructing newsworthy stories to cover and evaluating the reliability of their sources of information, aggregators' final step in the construction of

[20] This technological presence may bear some resemblance to Zelizer's (2007) technologically mediated forms of eyewitnessing, though in a notable inversion, it bears the opposite characteristics of that of 21st-century citizen eyewitnessing. Zelizer argues that citizen eyewitnessing via mobile technology has eyewitnessing's classic proximity and immediacy, but lacks the features of role and report that make eyewitnessing journalistic substantial. Aggregators' technological presence, on the other hand, retains much of the features of journalistic role and report, but lacks proximity, the fundamental constitutive element of eyewitnessing.

accounts of factual information — the means by which they verify information and present it to audiences — is the most contested. This process is colored by two often conflicting factors: The speed of aggregation work and aggregators' distance from their sources of evidence. As we have seen, this distance from evidence fuels aggregators' uncertainty regarding that evidence's veracity and pushes them toward attempts to verify it, but that distance can also become so great that verification becomes practically impossible. At the same time, the continual urgency under which aggregation is done can exert pressure against verification and lead aggregators toward less time-consuming and less effective half-measures of verification.

Every aggregator who addressed the subject asserted emphatically that ensuring that their information was accurate trumped speed — "The pressure to move quickly is nothing compared to the terror of being really wrong," said one aggregator at a national news organization — but it was also clear from their descriptions, and in some cases my observation, of their work that the relationship between speed and accuracy was not quite so simple. The response of one aggregator within a traditional news organization illustrates the ambivalence with which aggregators view the speed of their work in light of their professional obligation to present accurate information:

> Speed is everything. Well, accuracy is everything, so, fuck — don't quote me on that so I get fired. I mean, when they bring new editors in, they say, 'Well, what's more important, speed or accuracy?' It's that whole thing. And then you say accuracy, and they nod, and they say, 'That's right.' And then they say, 'But speed is 1B in this scenario.'

Still, while aggregators (and their editors) are hesitant to let speed obviate verification, the need to publish quickly compresses and accelerates the verification process. Among some aggregators, it was fairly common to post stories while waiting for phone calls or emails to sources confirming the information in them to be returned, and at SportsPop and another national sports site, posts were often edited shortly after they were published.

An editor at that site said the reason editing had been moved after publication in their workflow was "pretty much 100 percent speed." Other organizations such as Circa and VidNews prided themselves, however, on thorough editing processes in which two editors examined all stories before they were published, and Circa in particular often held off on publishing even highly newsworthy stories when its editors weren't confident in their accuracy. Speed thus represents an ever-present constraint on aggregators' verification practices and standards, but not a supreme one. As Usher (2014) has also found, it is continually countered, and often superseded, by aggregators' sense of professional duty to ensure the accuracy of their information as much as they are capable.

The question of whether and how to verify a story is influenced by several factors in addition to speed. The simplest and most prominent of these factors is tied to the source evaluation criteria outlined in the previous section: If an account is considered credible based on the reputation of its source or evidence of reporting used to produce it, then the aggregator will often forgo any steps to verify the information any further. Though aggregators often initially asserted that they took steps to verify or confirm the majority of what they published, more detailed probing of their processes typically revealed that in many cases, they allowed their sources' verification processes to stand in for their own, essentially outsourcing verification to the news organizations they cited, provided they held enough trust in those organizations' willingness to verify their own stories.[21] Jonathan Kalan, editor-in-chief of the history-centric news app Timeline, was one of the few to acknowledge this dependence directly:[22]

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[21] Pantti & Sirén (2015) describe a similar phenomenon in verification of amateur images: Journalists trust the ability of major global news organizations to verify the authenticity of the amateur images they post, and thus do not feel the need to verify them beyond that.

[22] Timeline represents a particular case because it is not fundamentally presenting an account of a news event, but of a timeline of historical events related to that event. The news account for which Timeline is citing a news source is taken more as merely a jumping-off point for the app's main historical narrative. That lack of centrality for the news account itself makes Timeline less likely to seek to verify the account it cites of the news event, because its own original contribution and editorial resources are devoted to producing historical narratives, rather than current events coverage.

> We're looking to [news organizations] that we think are respected enough and have a rigorous enough process so that if they published it, it's something that has been fact-checked and sourced. And so we're putting the onus essentially on them, but making it clear to readers that that's what we're doing by saying, 'This is our source for this.'

For many complex or difficult-to-access news stories, this is a practical and efficient approach to verification. Aggregators simply do not have the time or resources to verify the accuracy of, say, an investigative report on corruption in a state governor's administration, and such an approach to verification would be a remarkably redundant and inefficient use of journalistic resources from both an organizational and ecosystemic perspective. Just as it does in traditional reporting, the practical possibility of verification also thus plays a role in deciding whether and how to verify; if a story can be confirmed with a simple phone call, an aggregator is much more likely to attempt to verify it than one that would require at least a day's worth of reporting.

Another important factor is the significance of the story. Major stories, such as arrests or reports of deaths or matters of public safety — stories with much more damaging consequences if they turn out to be wrong — receive a much higher burden of verification than matters deemed more trivial. One national sports site rarely sought to verify the accounts it published, but instituted a rule requiring any story on an arrest or death to be held pending a confirmatory phone call to law enforcement, essentially because of the magnitude of the story and the reputational damage that might result from publishing it inaccurately. It is notable, though, that the significance of a story also increases the urgency with which it is produced, heightening the tension between verification and speed. Finally, aggregators are more likely to seek to verify elements of a story when they encounter factual discrepancies between multiple accounts of that story. In those cases, as several aggregators explained, clarifying the discrepancy through a

phone call or email (if it is possible) is more efficient than attempting to parse the competing versions without any additional attempts at verification.

Means of Verification

Once an aggregator decides to attempt to verify a story, the most basic step in the process is often simply to hold off publication to wait for more information that might corroborate or clarify it. This may seem a self-evident step, but it is an important one for aggregators, a conscious procedural signal to de-emphasize speed in favor of greater confidence in the story's veracity. Aggregators often talked about and treated news stories as either high-speed priority or less time-sensitive, and delaying publication on an uncertain story performed for them an important function in shifting it from the former category to the latter.

Corroboration is then a core tactic in verification for aggregators, as Ettema and Glasser (1998) found with investigative journalists. In most cases, aggregators are looking for multiple published accounts, at least one of them by a source they consider credible, that independently make the same report. The presence of those accounts, as long as they do not display any discrepancies, is often considered enough verification to confidently publish a story of one's own, linking to each of the corroborating sources. The corroboration process can become particularly complex when dealing with information posted on social media, since it is so easy there for a single account to be repeated widely, giving the appearance of independent corroboration.

Digital objects such as links, geotags, and timestamps can become important forms of evidence during this process. Several aggregators described using geotagging and chronologically targeted searches to isolate distinct accounts of events and home in on likely firsthand observation. The confluence of digital objects to form a corroborative web was evidenced as VidNews sought to verify the authenticity of a video purportedly of Jordanian airstrikes against the Islamic State the day after Sean's initial story. The video has been circulating online with a Jordanian state TV watermark, but Sean, another

VidNews producer and the organization's copy editor are uncertain about whether it has actually come from Jordan's government. Sean finds a video with the same watermark posted to YouTube on an account which, when translated from Arabic, appears to belong to Jordan's armed forces. He sends it to the copy editor via Google Chat, and she responds by looking over her computer monitor toward his desk to ask him for more details about the video. The copy editor accesses the website of Jordan's armed forces, hoping to find a link there to the YouTube account that will serve as an indicator that the account is indeed theirs. After browsing the site for a few minutes over the copy editor's shoulder, I spot the link to the YouTube account, which satisfies her questions about the authenticity of the account. She gives the go-ahead to attribute the video to Jordan's armed forces. In this case, then, the most important piece of corroborative evidence was the hyperlink from the Jordan armed forces website to the YouTube account, which formed a tangible connection between the two entities and served as evidence of the official imprimatur of the video.

In many cases, verification and source evaluation are virtually synonymous; the verification of information is not so much the process of independently confirming information or corroborating it with another source, but simply critically evaluating the source and making a judgment regarding its truthfulness. Several aggregators described their typical verification practices as a process of quickly Googling unknown sources to determine their background, funding, ideological perspective, and professional provenance. They also made use of collaborative discussions, sharing a link among co-workers on a group chat and asking critical questions evaluating the report in a common-sense way — questions such as "Does this seem likely? Does this fit into what we already know of the situation?" as BuzzFeed's Jim Dalrymple II described it. Where possible, aggregators will incorporate the specialized expertise of others in the newsroom, whether colleagues outside the aggregation team in larger news organizations or those who have developed specializations in particular areas, such as VidNews' Sean in the Middle East.

In general, however, this type of process is essentially evaluating the validity of other organizations' verification processes, rather than engaging in an original, independent verification process themselves.

By far the most widely professed — if not the most widely practiced — form of verification was the practice of calling or emailing an official source involved with the situation to seek confirmation of the central facts involved. When asked about verification procedures, virtually all of the aggregators asserted that they made such confirmatory calls, though as they racked their brains when I followed up with questions about specific examples, it often became clear that this was an exception rather than the rule — something that was done once every few weeks or months, rather than a part of their regular routine. There were some exceptions: SportsPop's writers called or emailed officials and spokespeople for clarification or confirmation several times during my week of observation there,[23] and the breaking news aggregation teams at BuzzFeed and another national news organization appeared to regularly contact sources. But on the whole, confirmatory contacts to sources were a curiously venerated form of verification, especially for how relatively rarely they were practiced. Among an aggregator's work, this method was characterized as the pinnacle of reliability. Every other form of information gathering or source of information was questioned by at least a few aggregators, but no one questioned the reliability of information gathered via phone call.

Like verification methods more broadly, confirmatory phone calls and emails tend to be used when aggregators are uncertain about a story's veracity or when the story is particularly significant (as in the national sports site's policy, noted earlier, of always calling before publishing a report of an arrest or death). Despite their perceived value,

[23] One SportsPop reporter in particular spent quite a bit more time on the phone interviewing sources than the others; some of these were confirmatory phone calls, but more often, they were interviews with athletes or celebrities who were pitching products. SportsPop would often highlight one or two buzz-worthy quotes from the interview — usually the interviewee's opinion on the sports controversy du jour or an anecdote about their personal lives — and briefly note the product they were pitching near the end of the article. These interviews were much more thoroughly interviews than the confirmatory phone calls, though they more closely resembled celebrity journalism than the interrogative interviews that journalists have tended to valorize.

these phone calls are rarely the first option attempted: As a breaking news reporter for a national news organization described, she seeks to corroborate information through aggregation first before shifting toward direct contact with sources.

> A lot of times, aggregation is sort of the thing that we do in the first few minutes that something is happening, but then as you go farther along, you're making calls on your own and trying to hammer out some of the details. And so those two things are happening simultaneously.

When a source is able to confirm or clarify information via phone or email, it makes for a simple authentication of the story's accuracy. But the confirmatory phone call becomes much more complicated when a source is unavailable or declines to comment. In those cases, the speed-based tension comes into play as aggregators wrestle with how long to wait for a returned phone call or email that may never come. (One social news site's rule of thumb is a one-hour wait time before publishing.) Even without any information from the phone calls, aggregators seem to feel more comfortable running stories after making the call, simply because they are able to indicate in the story that they went through the effort of trying to contact the source.

In most cases, these phone calls are probably not best characterized as interviews; they are often meant simply to confirm the veracity of a published report, and follow-up or probing questions are only necessary if the source cannot cleanly confirm the story on the first pass. Chris Krewson, editor of the local news aggregator Billy Penn, described the typical calls in his previous aggregation work at *The Hollywood Reporter* this way: "The phone call lasts five seconds, and it's, 'Hey, we heard this story. Can you confirm that this happened? Yes, no, or no comment?' And sometimes a no wouldn't even stop the post from going up." Though these confirmatory phone calls may be considered reporting — and aggregators often did refer to them that way — they represent a rather thin brand of it. Aggregators begin with a piece of information backed by evidence gathered and published by another journalist, and seek to gather one more basic piece of

corroboration to enable them to present that claim themselves. Confirmatory calls and emails are remarkably efficient ways to validate the credibility of information before re-publishing it, but they constitute quite an atrophied form of information gathering, especially given their venerated place within aggregators' conception of their own work.

Communicating Uncertain Information

This pastiche of information gathering and verification methods yields an assortment of information of varying degrees of reliability, and which the aggregator feels varying degrees of certainty in vouching for its accuracy herself. Because of the prominence of this epistemological uncertainty in their work, aggregators make ample use of a range of linguistic and presentational tactics to communicate their uncertainty about the information they present. The simplest and most common is the attribution of information in the story to other sources. This, as we will discuss further in Chapter 8, is a norm among aggregators primarily for ethical reasons, to give credit to the sources from whom they borrow information. But aggregators are also quite conscious that statements of attribution, such as "according to the *Herald*," serve a dual purpose, distancing them from that information and, they hope, from the censure that will come if the information turns out to be inaccurate. BuzzFeed's Jim Dalrymple II, for example, laid out two purposes for linking and attributing assiduously: The first was ethical, and the second was that "It also just covers you, like if for some reason they were wrong, you can go, like, 'Well, you know, we reported what they reported, so…'" In this way, attribution serves a similar purpose to the one quotes have historically served for journalists (Tuchman, 1978); while quotes allow journalists to distance themselves from opinionated statements in order to maintain objectivity, attribution allows aggregators to distance themselves from inaccurate information in order to maintain credibility. Of course, aggregators also recognize that this distancing has only limited effectiveness and that ultimately they are responsible for the accuracy of the accounts they publish. But when their work is so

reliant on the information-gathering of others, such strategic distancing becomes a particularly prevalent part of their presentation.

For stories that aggregators are more thoroughly unsure about, carefully phrased attribution of information may not be enough. When aggregators are this skeptical about either the truthfulness or news value of a story, they will often simply choose not to run it. But at times they feel compelled to publish something on it, because the story is generating an enormous amount of online conversation and traffic and they feel they cannot ignore it, or, in VidNews' case, because a client has specifically requested it. In those cases, aggregators may communicate their uncertainty about the story by putting a twist on the story to sidestep the issue of its veracity entirely or to directly question its legitimacy. SportsPop employed the former approach when The Associated Press moved an unconfirmed, anonymously sourced report on the identity of a surprise Super Bowl halftime show guest. One of the writers wanted to cover the news, so she and the editor decided to approach it as a list of people who would be better guests than the musician who had been reported. The editor described the angle to her as, "The AP is reporting this. It's not confirmed. Until it is confirmed, let's hope it's one of these people." VidNews often employs the latter approach; since part of its organizational mission is to provide media analysis, its editors prefer to compare and critique media coverage of a story if they are dubious about its value or veracity.

Craig Calcaterra of NBC Sports' Hardball Talk accomplishes the same purpose more candidly with straightforward statements about his skepticism about a report's accuracy. "We have a very conversational style when it comes to these sorts of things as far as our writing goes," Calcaterra said. "So we'll say things like, 'Hey, take it for what it's worth, but this guy's saying,' or 'Nothing official, but the word is…' and so that signals to the reader that this is just chatter."[24] In Calcaterra's case, this uncertainty is

[24] Notably, Calcaterra said he only engaged in this strategy for stories involving baseball transactions — what he considered minor news that relies primarily on anonymously sourced reports — and would not take this approach with more significant or sensitive stories.

expressed through greater transparency about his opinions regarding the reliability of his information, though in other cases such as SportsPop's example, aggregators attempt to mitigate uncertainty by largely eliding the question of a report's veracity. While journalists have long used careful language to communicate uncertainty about the information they present (though stilted constructions like "it is unclear…"), aggregators are often able to use a greater range of transparency and conversational tone to convey this uncertainty directly to their audiences, partly because they are less bound by the traditional professional strictures of objectivity and partly because they have a greater need to continually express deep uncertainty in their own reports than reporters have typically had.

Another important technique for negotiating uncertainty regarding the information aggregators are publishing is to update stories.[25] For some organizations, this was a prominent part of their strategy, particularly on breaking news or quickly changing situations. Aggregators will quickly post a brief item on the initial report, then update it as more information either confirms, adds to, or changes the initial story. Story updating is also used often in conjunction with confirmatory phone calls and emails as a way to publish a story quickly while waiting for it to be verified. SportsPop's editor gave an example of this tactic in action when he described how his site approached the initial reports of "Deflategate," the accusations that a National Football League team improperly inflated footballs during a 2015 playoff game. A respected local television journalist first tweeted news of a league investigation into the deflated footballs in the middle of the night but did not file a full story, and SportsPop contacted a league spokesman to confirm that an investigation was occurring. After an hour or two without a response, SportsPop published the story because, the editor said, "we felt good enough, based on [the local

[25] Updating stories has become commonplace throughout online journalism, whether stories are reported or aggregated. But while reporters have primarily updated stories as a way to cope with the demands of an accelerating news cycle, aggregators do so in part as a hedge against falsehood in their stories. Saltzis (2012) found that confirmation of facts or correction of misinformation was a relatively rare use of updating stories by legacy British news organizations, but they emerged as a primary use among the aggregators in this study.

journalist's] reporting, based on the fact that we had reached out, that if it came back that if it wasn't true, at least we had made the calls and we would get that information and be able to update and correct accordingly." The league spokesman returned the call later that morning, and the story was updated with his confirmation. Allowing for stories to be updated enables aggregators to publish information that is less thoroughly verified, giving them room to modify or correct faulty information as they gather evidence. It helps them resolve the tension between speed and verification, allowing them to begin with lower epistemological standards as their priorities are weighted toward speed, then inch those standards up after a story is published and speed becomes less of a factor. It does not eliminate the damage done by publishing inaccurate information, but it can mitigate that damage somewhat by enabling quick, transparent correction.

It is not clear whether audiences expect the same level of accuracy from these aggregators as they do from traditionally reported pieces. Since many aggregators are writing under the auspices of legacy news organizations, audiences likely make little differentiation between their work and the rest of the content published by their organizations. Audiences may hold lower standards for aggregated news at online news organizations that cover topics such as sports or entertainment that are considered to be more frivolous, though researchers have generally found accuracy to be paramount among audience expectations for news regardless of context (Gil de Zúñiga & Hinsley, 2013; Gladney, 1996; Heider, McCombs, & Poindexter, 2005; Neuberger, 2014). Regardless of what their audiences expect, aggregators tend to hold similar standards of accuracy as reporters traditionally have, though the secondhand nature of their information leads them to take more drastic steps to cope with their uncertainty about its accuracy and distance themselves from possible errors.

Comparing Aggregation Work to Reporting

The information-gathering and knowledge-producing process of aggregation I have just described bears a strong resemblance to reporting in its use of professionalized

news judgment to evaluate and select sources, gauge evidence, and seek out official corroboration to present an epistemologically validated account. But the secondary nature of aggregation work introduces numerous shifts in the nature of this process; to begin with, the use of information that has already been professionally gathered and published makes it a far more efficient way to generate news content. At SportsPop, most writers mix some traditional on-location reporting assignments in with their aggregation work, and as we will explore in Chapter 8, such work is an immense point of pride for its writers and editors. But it is much less effective than aggregation at meeting the site's day-to-day goals of producing articles on hot topics that are likely to be widely shared on social network sites. One of SportsPop's writers illuminated the inefficiency of reporting in explaining his ambivalence about that work:

> Sometimes the problem is that it takes so much longer to write a reported story, to actually go out and report a story, than it would to just sit at my desk and find what other people have done and react to it. … If I was focused, if there was a lot happening, I might do eight to twelve posts, if I'm just sitting at my desk. If I'm out there doing something, if I'm reporting, then I've got to find the guy. A ton of baseball writing is just standing around, waiting for guys at their lockers, and sometimes you just stand there for two hours and not get anything, and then you have to go back the next day. And I mean, it's anxiety-inducing, to be honest, if you know that you could've gotten — you know, I might have gotten 300,000 pageviews if I'd have just sat at home that day.

Reporting has been characterized as a means of "producing a considerable body of knowledge in a short span of time" (Ekström, 2002, p. 270), but as this writer describes, it is actually quite slow and inefficient — to an anxiety-inducing degree — compared with aggregation.

Aggregators were split as to whether their work was a form of reporting. One group said what they were doing was not really reporting, because reporting involved

some form of in-person observation or interviews. For these aggregators, reporting was defined by two major factors: first, by physical presence and proximity to news events and sources; and second, by a story ideation process in which reporters generate ideas originally and organically, as opposed to from other published sources. Another group argued that they were in fact practicing a form of reporting, because the definition of reporting was expanding to include more forms of online information gathering. This group appealed to the enhanced proximity to sources and events afforded by social media and live press conference video, similar to the way those affordances have allowed citizen and participatory journalism to encroach on territory that once belonged exclusively to professionals (Lewis, 2012), and they also noted that most reporting consists of desk work like their own. To these aggregators, reporting consisted primarily of gathering information on news events and exercising news judgment in evaluating and organizing it. These definitions of reporting and aggregation are deeply tied not only to aggregators' epistemological conceptions of their own work, but to their professional identity, which I will explore more deeply in Chapter 8 — whether they deeply associate the work of reporting with professional journalistic status, and the extent to which they desire to claim that professional status for themselves.

Both groups have salient points. The work of aggregation, as observed and described in this data, is built around the same essential epistemological steps as reporting: Both aggregators and reporters use news judgment to construct newsworthiness out of events, evaluate the factual reliability of sources in order to use them as the basis for their accounts of those events, gather corroborating evidence to bolster the credibility of their own accounts, and strategically communicate and hedge their uncertainties for their audiences. Moreover, forms of technological presence are allowing them to traverse the distance from news sources and events that has separated them from reporters. However, aggregation work is colored at every step by its inherently secondary nature to a degree that reporting is not. Aggregators' dependence on other

published journalistic work constrains their news judgment by limiting their news to what has already been considered newsworthy by other journalists. It defines aggregators' evaluation of published sources in terms of their evidence of reporting work. And it tends to limit their means of verification to confirming that which has already been asserted by other journalists. If aggregation is indeed classified as a form of reporting, it is a thoroughly and fundamentally secondary one, yet one which reaffirms the same values and verification norms.

CONCLUSION

Aggregation is in every way a form of second-order newswork, ordered on the same epistemological principles on which professional journalism has built its methods of information gathering and verification — namely, modern, realist news reporting. Yet aggregation is scaffolded on top of those reporting methods, oriented entirely around gauging the presence of reporting, gaining proximity to it, and augmenting it by setting it against other reported accounts. If reporting is at its core gathering evidence regarding current events of public interest, aggregation is gathering evidence of that evidence.

The difference between aggregation and reporting is not, then, one of kind but one quite literally of degree. Aggregation is one degree further removed than reporting from the objects on which the two forms build their news accounts — experiential access to news events through observation, access to the knowledge of sources through interviews, and access to tangible or quantified substantiation of information through documents and data. Aggregators seek those forms of evidence just as reporters do, but they do it by examining the texts those reporters produce.

This is not an absolute distinction; many of the characteristics of aggregation work described in this chapter have analogs in reporting work, both traditionally and in its contemporary forms. Reporters often find themselves weaving information from other published accounts into their accounts because they can only be in so many places and talk to so many people for a single quick-turnaround story, and when they do, they

evaluate the veracity of that information in many of the same ways aggregators do. Nor were the practices of making confirmatory phone calls, updating quickly changing stories, or using language to distance themselves from uncertain information born with aggregation.[26] Reporters have used many of these strategies for at least decades, but the role of each of them is substantially heightened within aggregation. In reporting, they play a tangential role, supplementary to the primary work of gathering evidence through forms of physical presence; in aggregation, they are the entirety of the work. As such, they bear a much heavier burden in ensuring the validity of the information produced, a task that in reporting remains the domain of observation, interviewing, and examining documents. A reporter can rest on the certainty provided by those evidence-gathering methods in presenting her work, but the aggregator must overwhelmingly rely on these secondhand techniques to accomplish that certitude.

This chapter did identify one significant exception to the secondhand nature of aggregators' information-gathering, one that brings aggregation somewhat closer to the realm of traditional reporting. The technological presence afforded by accessing newsmakers' and officials' statements through social media and live video of breaking news events and press conferences eliminates the reporter as a mediator, giving aggregators similar direct access to evidence available to those reporters — or, for that matter, any citizen with an Internet connection. This presence does not completely eliminate this remove, however. It is heavily mediated, and offers limited, if any, opportunity for interactivity or interrogation.

Aggregation's secondhand nature relative to reporting does not necessarily mean the two have a parasitic relationship, however. Nothing about the practice of aggregation that I have described in this chapter entails that aggregation actually weakens the reporting on which it relies, only that aggregation depends on it for both its

[26] Some practices are analogous to the work of other traditional journalistic roles as well. The practices of monitoring other published news sources and either folding their information into one's own account or determining what needs to be done to verify their information is a key part of assignment and copy editing in newspaper and online newsrooms, as well as producing in TV newsrooms.

epistemological standards and much of its content. Aggregation can certainly be damaging to reporting work by damaging the market for that work if it fails to link to it or reproduces reported content too exactly, but neither of those practices are inherent in aggregation, especially since aggregators have denounced those practices in their professional standards, as I will show in Chapter 8. Reporting certainly does not need aggregation as aggregation needs it, but the relationship can bear some marks of a symbiotic one if practiced well, with aggregation extending the reach of reported accounts, clarifying it and amplifying it for the public.

Aggregation's fundamental reliance on the published work of others and its distance from the events and sources it covers makes it more deeply infused with uncertainty than other forms of newswork. Sean's difficulty in finding a usable firsthand source to document events he was already confident had occurred illustrates the acute contingency of this work on the work of others. Reporters are, of course, also reliant on their sources for information, and when they have difficulty gaining close access to those sources, it can result in the same type of uncertainty that marks aggregation. But in aggregation, this reliance is continually laid bare as aggregators are forced to react to the news judgment, reporting access, and publishing schedules of their fellow journalists. Reporting is a deeply flawed and capricious means of gathering information about the world, but its emphasis on the experiential does offer the journalist the illusion of certainty regarding the information it gathers. Reporters have their own observation and firsthand contact with people involved to reassure them that what they are depicting is indeed reality; aggregators have only written and visual texts, composed and mediated by others. Aggregation is thus suffused with a profound uncertainty about the correspondence of its work with reality, in a way that goes beyond other journalistic forms.[27] The epistemological contingency and indeterminacy of aggregation's sources are

[27] Several scholars have argued that professional journalism as a whole is permeated by uncertainty, which prompts them to develop routines such as pack journalism to resolve it (e.g., Sparrow, 1999; Zelizer, 2015). The uncertainty they describe, though, is a form of *professional* uncertainty — the uncertainty of journalism's place in the social world as a profession, its authority as a cultural institution, and its

not new in journalism; the origins of much of the information printed in a 19th-century newspaper were far more dubious than what today's aggregators use. But what is novel is the combination of this indeterminacy with a deeply realist epistemological mindset, which produces a deep uncertainty among aggregators that was not present among their 19th-century forbears, who appear to have been relatively untroubled by whether each detail of their published accounts corresponded with reality.

This uncertainty forces aggregators to confront questions of reliability of their information more often and more prominently than most reporters. Aggregators mitigate these questions in two primary ways: By leaning on the greater epistemological certainty provided through reporting, whether in their own work or in the sources on which they rely; and by using careful textual presentation in the form of attribution, skeptical story angles, and updating stories to distance themselves from unreliable information. The former aims to bring them closer to the objects of evidence they use to construct knowledge, and the latter aims to maximize their social authority to present that knowledge while limiting their liability if the knowledge is deficient.

These practices seek to limit the effects of this uncertainty, but using the affordance of technological presence is a crucial practice for aggregators in its attempt to eliminate uncertainty at the root. By offering direct access to important objects of evidence, technological presence increases the confidence that aggregators put in the validity of the evidence they include in their accounts. It also expands their definition of reporting to the point where their own work is able to fit under its umbrella, elevating their own work to sit more comfortably alongside that of traditional journalists. Technological presence accomplishes this to a greater degree than confirmatory phone calls and emails because it allows aggregators to gather evidence synchronously with

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continued economic viability as a practice. The uncertainty I describe here is *epistemological* uncertainty — the uncertainty of whether the information one gathers and publishes is accurate, or corresponds with reality. The two are certainly related, and aggregation experiences much professional uncertainty as well, but the primary way in which uncertainty presses on the daily work of the aggregator is in its epistemological form.

reporters, freeing them from relying on those reporters' news judgment, though it ultimately privileges official sources to an even greater degree. Confirmatory contact may offer direct access to sources, but it still entails borrowing the news judgment of the reporters who first published the story and (likely) contacted the source. To the extent that aggregation has the capability of transcending second-order newswork, it is through technological presence. But without this presence — and even with it, as the presence afforded by live streams and social media is only partial — aggregation remains deeply constrained in its ability to enact the epistemological principles of modern professional journalism, even as it venerates and strives after those principles.

Chapter 7: Aggregation and the Transformation of News Narrative

After examining aggregation as an epistemological journalistic *practice* of evaluating and gathering evidence in the previous chapter, this chapter looks more closely at the *form* in which aggregation presents this information to audiences. Specifically, this chapter addresses the questions raised regarding narrative in Chapter 4: What role aggregators give narrative in their presentation of news, what forms they use to communicate news, and how they understand news events in narrative terms. I thus examine the way aggregators communicate news in particular narrative forms as well as the way aggregators conceive of events themselves as part of narrative structures, particularly as those two elements relate to the role narrative has played in other traditional forms of journalism.

I find that aggregation is not freed from narrative as a device for making sense of and communicating the social world, but is instead bound up in it, though in a different way from traditional journalism. Aggregation shifts the primary narrative level on which journalism is produced (at least consciously) from the micro level to the meso level, focusing on news stories primarily as the relationship between news events over time and in juxtaposition to other issues and topics, rather than as textual conventions and forms. In practice, then, the idea of the atomic unit of news is not so much about dismantling textual forms of news as it is about broadening news' sense of narrative by seeing each discrete news event as a part of a larger narrative structure. Because their work relies on the published work of others, aggregators are positioned to view their own stories as primarily being part of a narrative that stretches beyond a single text to include the stories on which they are built, rather than as a self-contained narrative in itself. I approach this analysis in three parts, corresponding to the three levels of narrative identified in Chapter 4: First, a brief section on macro-level narrative, then a section on the meso level that addresses these relationships between stories and the exercise of news judgment to

understand them, and finally, a section on the micro level examining the way aggregators communicate and understand textual narrative forms in their work.

MACRO LEVEL

Aggregators rarely touched on the macro, or myth, level of narrative that I could observe either in fieldwork or in interviews. When asked open-ended questions about narrative, they characterized narrative as textual conventions that existed within individual articles, rather than as archetypal forms that extended beyond stories or particular news issues. This does not mean, of course, that their work did not exist on the level of myth; indeed, being a largely naturalized ideological form, myth is difficult for journalists to consciously identify and articulate.[28] But aggregators tended to be working under the same ideological structures as professional journalists historically have, which gave rise to a similar (unspoken) implementation of myth within their work. (Some of these professionalized norms and structures will be examined in more detail in Chapter 8.) Though less professionalized than traditional journalists, aggregators' senses of what makes a good story and what narrative themes would be most resonant among audiences were virtually the same as those of other professional journalists.

This confluence was indicated by several aggregation organizations' use of the websites of leading global news organizations to gauge the appropriateness of their story choices. As discussed in the previous chapter, this similarity was in part a product of the inherently second-degree nature of aggregation work, which fundamentally relied on the work of those organizations for the material on which their content was based. But it was the melding of what both those organizations and aggregators considered newsworthy stories, which stemmed from their overwhelmingly similar professional senses of the

[28] There was also an important methodological factor in the lack of articulation of narrative in the mythical sense by aggregators in the study: The conceptualization of narrative in the macro, meso, and micro levels was not made before the data was gathered, but instead arose in part out of the data was collected. This meant there were no questions in my general interview script examining the macro level in particular, which limited the ability of aggregators to address that level explicitly. Interviewees were, however, asked an open-ended question about whether they considered themselves a storyteller or their work to be a narrative, which allowed for them to articulate elements of narrative in their work on any of the three levels, including the mythical or macro level.

mythical frameworks in which the world played out, that made such dependence feel natural. Take, for example, the statement of Circa's editor in chief, Anthony De Rosa, that "I usually feel like we've done a good job if I can look at the front page of the newspaper the next day or watch the national newscast, and I look at what they're reporting, and we've covered all their stories."

This intended similarity in story selection was not necessarily because of conscious copying of those news organizations; even as they relied on those organizations for much of their content, De Rosa and others preferred to beat those organizations to most stories in part through their use of technological presence. Rather, it was more fully a function of the near-complete overlap of news judgment, which resulted in part from dwelling within the same mythological milieu. Aggregators and the journalists who ran traditional news organizations shared the same beliefs about what events fit into compelling mythical frameworks; each of them saw the story of an American kidnapped by the Islamic State as a helpless victim, unrest in Yemen as a glimpse into "the other world" (Lule, 2001), a plane crash in Taiwan as a tragic loss in the struggle between man and machine. In a way, this confluence in judgment about the nature of myths in explaining the social world preceded even the essential dependent nature of aggregation; it was what made a work form dependent on traditional media make sense in the first place.

There was one notable case in which mythological forms became explicit in an aggregator's narrative work: An editor at a social news site said his organization explicitly considers archetypal narratives as a way to ensure that its stories connect emotionally with readers and therefore increase their chances of being shared more widely:

> Something that we're specific about is Hollywood narratives — you know, the basic outline of the way stories work, like hero versus villain and overcoming obstacles, like six or eight basic Hollywood narratives. Thinking about those

> kinds of things, and thinking about, 'Can we frame this, or tell this story in a way that the reader can understand clearly why we're telling this story, and what they're walking away from this story thinking?' Without, as I said, beating them over the head.

For this site, that mythical narrative framing manifested itself in articles that extracted unambiguous heroes and villains from other sources' stories and attention-grabbing headlines (like "Bullies Couldn't Stop This Girl From Shaving Her Head to Honor Cancer Patients") that clearly identified those heroes and villains so as to elicit emotional reactions. In this case, macro-level narrative devices were used to serve a very pragmatic purpose: Exploiting their ability to facilitate emotional connection across broad cultural contexts in order to induce readers to share and increase the story's reach and traffic. On the whole, however, I saw no substantial differences in the way macro-level narrative structures influenced aggregation from the way they have shaped professional journalism more broadly.

MESO LEVEL

The meso, or story arc, level of narrative emerged as the central mode in which aggregators incorporated narrative into their work, as they viewed news events and their accounts of those events not as discrete stories in themselves, but as parts of a larger interconnected web of narrative arcs in the news. This meso level, which involved identifying events and situations as news stories and constructing narrative trajectories for those stories as they developed, was a central realm in which aggregators made narrative distinctions both from traditional journalism and from each other.

Differentiation Through Narrative

Specifically, several aggregation operations' attempts at differentiation within a crowded online news environment deeply shaped their journalists' narrative emplotment, or the particular narrativized way in which they view the world of news happenings. As I argued in Chapter 4, the practice of receiving the chaotic jumble of events in the social

world in a form that aligns with the conventions of news narrative has been an integral part of all of modern journalism since well before aggregation emerged. But aggregation has shifted this process of narrativizing social reality from a generic practice common across journalism to a more specialized one in which all aggregators narrativize social reality, but according to the particular professional exigencies precipitated by their organization's attempt at differentiation.

In a crowded online media marketplace — and with a core practice inherently dependent on the work of others — aggregation organizations heavily emphasized differentiation within that online journalistic field as crucial to their identity and survival. Many of these organizations had seized on a particular facet of news coverage that they held fast as their distinct contribution for news consumers (they occasionally referred to this as "our value proposition" or "our value-add"). For VidNews, that attribute was analytical coverage that presented several perspectives on an issue but also cut through them to provide a clear takeaway. For SportsPop, it was earnest, eager coverage of "viral" or "water cooler" stories that everyone online seemed to be talking about, or was about to be.

These distinctive elements in turn shaped the narrative forms in which the aggregators in those organizations viewed news events themselves. For SportsPop's writers, the arc of a particular story consisted not so much of the events of that story as it did the degree to which that story was the object of public attention. The fact that people were talking about the story became, in a way, the story itself, with traffic and sharing metrics and social media conversation dominating conversation among writers and editors about the story's development and forming a wrapper around the news events that became an inextricable part of the news narrative, making narrative virtually indistinct in some ways from metanarrative. If an ongoing story had reached the end of what journalists might typically consider its news value but was still garnering substantial attention, SportsPop journalists were expected to revise their conception of its narrative

arc accordingly. The managing editor of the department that housed SportsPop said aggregators should think of the arc of a news story not so much in terms of their narrow conception of newsworthiness, but in terms of who might be talking about (and clicking on) that story:

> News comes to people at different times in the cycle, and I think that traditionally — and too often, it was like [at my previous news organization], 'Well, we've already done that.' Well, guess what, you're going to do it again. And again and again and again. And so I think someone who's a good aggregator not only recognizes that but embraces that, and recognizes that, 'Hey, look, if [professional football player] Marshawn Lynch is doing it [i.e., spurring conversation], then I'm going to write the hell out of Marshawn Lynch until that dies. And then I'm going to go on to the next thing.'

For SportsPop, then, considering the meso level of narrative is much more than simply assessing whether a story has already been written, but examining the conversation around the set of news events in addition to the events themselves.

Likewise, for VidNews, the news story became the various shades of opinion and analysis that layered on top of a news event; for VidNews journalists, the story was not the event itself, but the event specifically and consciously as it was filtered through those layers. As one VidNews editor described the ideal story for his organization: "Where there's a lot of perspectives, a lot of opinions, and a lot of sources that we can go through and tell people, 'OK, here's what the real story is, this is what all these different sources are saying.'" The awareness of media coverage of a story has long influenced journalists' perceptions of the narrative trajectory of a news story or issue. But among aggregators, particularly with their inherent reliance on media coverage to access the story itself, that media coverage tended to be more of a conscious and essential part of the story, rather than an add-on that could be strictly separated from the news element itself.

Circa and Plotting News Stories

Circa's form of differentiation had an especially deep-seated and distinctive influence on the ways its journalists viewed news events as narratives and the ways those perceived narratives structured its coverage. Circa's distinctive feature, both in its public presentation and in its writers' minds, was its practice of breaking down stories into atom-like "points" of fewer than 300 characters and sending updates to those who follow an ongoing story allowing them to see only the newly updated points. This feature would seem to operate on the micro level of narrative, disassembling the traditional article format into a series of discrete chunks. Instead, its influence was primarily on the meso level, changing the way its journalists viewed and structured news events as ongoing stories.

First, this atomized structure encouraged Circa's journalists to view stories not more narrowly but more broadly. With every news event or alert that passed through their news filters, Circa's editors engaged in a conversation through the group messaging program Slack evaluating its relationship to the web of ongoing news issues and developments on which they have developed stories that could be updated. The news event was not evaluated as newsworthy by itself, as it might be in many traditional newsrooms. Instead, it was evaluated as an extension of a larger ongoing story, and specifically whether it "moves the story forward." If, for example, the president made a speech about a proposed piece of economic legislation, the speech was not viewed as a news event in itself, but as a small piece of a much larger news story — the fate of this proposed legislation. And the questions editors asked one another about this event were not about whether to run a story, but whether it was a significant enough development within the larger story to merit an update or push notification on that story, or whether it transformed the larger story enough to require the entire story to be reframed and reorganized.

Other news organizations have also adopted this broader conception of the nature of a story; Chris Krewson of the local news aggregator Billy Penn described creating

collections of links on ongoing news stories that users can "follow" to receive updates on those stories, and the content recommendation system Contextly recently introduced a browser plugin to automatically serve a similar function on any news site (Singel, 2015). But Circa's idea of a story as something broader than a single event ran deeper than these initiatives, because it conceived of the "atomic unit" of news as being smaller. For Billy Penn and Contextly, the basic unit of news is an article (linked elsewhere in Billy Penn's case), but for Circa, it was a single fact — the smallest possible indivisible unit in building a news story. For Circa, then, these facts had to be strung together into a broader story that extended over time; unlike an article, they had little value standing alone, unless that broader story was already known.

Every new incoming fact (or potential fact, depending on its degree of verification), then, presented difficult questions for Circa editors: Which story in our system, if any, is this fact a part of? Is it important enough to change the trajectory of that story? How should it be integrated into that story? If it does change the story's trajectory, are there existing facts that are no longer within the story's scope? Should those facts be removed from the story? Circa editors addressed these questions by examining news entirely in terms of its place within the context of that larger narrative arc, as Circa deputy editor Evan Buxbaum described it: "We use the term 'pushes the story forward,' 'drives the story forward' — things that actually, if you get that update, if you're looking at the story, it helps contribute to the narrative." For some stories, the question of whether a fact drove the story forward was quite simple. In criminal cases, for example, the substantial steps in the story were typically clear from the outset: Arrest, charges, pretrial arrangements, trial, and conviction or acquittal. But most news events come without the clear narrative arcs of a criminal case, and the narratives they appear to form can splinter, be absorbed, take sharp turns, and dissolve, leaving journalists and readers wondering if they ever constituted a coherent narrative to begin with.

Circa editors resolved this narrative uncertainty and complexity by focusing on action. For Circa, almost all of the facts that constituted a story and drove it forward were events. The corollary question to "Does this drive the story forward?" was, according to Circa's Ted Trautman, "Did something really happen?" He added, "I guess that's kind of vague, but we definitely try to avoid stories like, 'This might happen soon.'" In many cases, this ruled out speech itself as an event, unless the speaker had the political power to enact the course of which they speak, in which case speech could become action worthy of a story update. "It doesn't add anything if generic congressman says something about something," explained Buxbaum. "But if you go to, like, a peace talk or the Iran nuclear conversation, there's people, their status affords them — whatever they say becomes the news, right?" Quite naturally, this conception tended to lead Circa toward official sources — and beyond that, a subset of official sources with significant individual power.

In other cases, the "event-ness" of a development could trump conventional news value in determining facts around which to build a story. Circa technology editor Nicholas Deleon detailed a situation that helps illustrate this point: *The Wall Street Journal*, Bloomberg, and Reuters all reported, citing anonymous sources, that Apple was developing electric car technology. But because the report was difficult to distill down to an identifiable, confirmable fact — in large part because it was attributed to anonymous sources — Circa did not publish it as a story. But the next week, a small electric car battery manufacturer filed a lawsuit against Apple accusing it of improperly poaching its engineers. Though this lawsuit was only a tangential occurrence in relation to the larger story of Apple's work developing electric car technology, it was a tangible enough event for Circa to base a new story on. But with the lawsuit story created, Deleon said, Circa had an event-based peg to eventually transform into a story on Apple and electric cars more broadly: "Now, over time, if more information comes out with — and more credible information — into the 'Apple getting into the electric car business' story, if

more of that comes out, then that would go into that story." Circa's desire to link discrete atomic units together into broad news narratives could result, then, in events being swept into those narratives in ways that may not have matched the way the story actually unfolded, simply because they were able to be confirmed as discrete events.

To organize all of its stories, Circa used a semi-formal taxonomy that its editors call a system of "branches." Major topics such as Spain, Apple, or the Boston Marathon bombing existed in Trello, a workflow management software system, as "main branches," under which each individual ongoing story within that topic was listed and often categorized into subgroups within that branch. The main branches were topics, but each individual branch was conceived not as a topic, but as an ongoing "story" — a series of events or an ongoing aspect of a larger issue. De Rosa kept this branch system in Trello open most of the time that he worked, continually moving between it on his desktop monitor and Circa's content management system on his laptop. Circa had no centralized list of main branches, but with its branch system, it did have a systematic map of every story it had covered, virtually all of which are considered "active" or update-able. This represented a substantial departure from the organization of coverage at traditional news organizations, in which stories are archived and accessible through keyword or topic searches, but not organized as a whole according to any taxonomic order. This system of classifying stories led Circa editors to think of stories as parts of that whole "tree" of stories, rather than as individual accounts that may have simply shared a topic with stories done in the past. "When there's a new piece of information that comes in, I'm trying to think of where that goes in our general coverage, rather than thinking of things as they're individual stories," said Circa senior editor Daniel Bentley.

This broader framework means that news was viewed as part of a more cohesive and less fractured narrative structure by Circa's journalists than by traditional ones, and Circa's branch system encompassed a remarkable breadth of stories for its relatively small staff and short history. ("Rarely, I feel like, we come across a story that doesn't fit

somewhere," said contributing editor Adrian Arizmendi.) Still, it could also lead events to be neglected or misclassified if they did not have a natural fit within Circa's network of stories. This was evident in Circa's coverage of false statements about Muslim-controlled areas in European cities that were "no-go zones" for non-Muslims. Circa had ignored a statement by a Fox News anchor about such zones as cable-news blather, but when video surfaced of a British reporter cornering potential U.S. presidential candidate Bobby Jindal on the issue, Circa editor-in-chief Anthony De Rosa considered adding an update because of Jindal's likelihood to run. Sitting at a table in a fifth-floor Manhattan office — the only Circa staffer in a bright, bustling space that housed four other tech startups — he messaged Arizmendi, who served as the app's de facto politics editor, asking, "Do we have a Jindal 2016 story?" They didn't, and the two decided together it was too early to give Jindal his own story, so they held off on publishing anything about the no-go zones claim. The following day, the mayor of Paris threatened to sue Fox News over the claim, giving De Rosa a sufficiently substantive narrative thread to hang a story on the Muslim no-go zones — though this would be built around the Fox News claim, not Jindal's statements. "Now that we have a confluence of all these different things happening, we can use it as a way to track the lawsuit, which seems like something that's a lot more concrete than just Jindal popping off on TV," De Rosa said after assigning the story.

Had Circa possessed a story on Jindal's potential candidacy in its system, it may have published Jindal's statements as an update to that story. Instead, since Circa did not have a particular container for that story, it wasn't a story. It was not enough in this case for the story to be noteworthy; in order to be published, it had to be a story that fit more closely into one of the particular story structures Circa had built. The way in which the story was narrativized was thus determined not only by the journalists' professional conception of news, but also by the distinct infrastructure for story arcs necessitated by Circa's broader approach to narrative. Having no clear place to put a story made it harder

for Circa editors to conceive of the news value of that story, and the converse was also true. A more incremental update to a story may have been newsworthy because of its fit into an existing narrative structure; the decision about its newsworthiness "was made two years ago," as technology editor Nicholas Deleon described one example.[29]

The centrality of the branch system as a narrative structuring device created additional decisions for Circa editors: Not only were they considering an event's place within an individual story, but they also had to ask where an update might fit within the branch system, how it related to other adjacent stories Circa had published. Miscalculations or disagreements on these questions could be difficult and time-consuming to resolve. Several Circa editors described their frustration with straightening out misplaced updates. In one example I observed, the U.S. Supreme Court announced that it would take up a gay marriage case, and a Circa editor updated an existing story on the Supreme Court's previous ruling on gay marriage — on the federal Defense of Marriage Act. But another editor explained to him via chat that the ruling would likely supersede state laws on gay marriage, so the correct story to update with the news was Circa's story on state-by-state gay marriage court rulings. The editor was forced to undo the changes he had made, re-make them on the other story, and republish both stories.[30] The ability to see news events in the context of the larger narrative arcs to which they belonged — and not just their own, but other adjacent narrative arcs as well — was a crucial skill for Circa editors.

Not only did Circa's narrative system of categorizing news events as updates to larger, ongoing stories encourage its editors to view those events in relationship to a broad range of adjacent stories, it also lent stories a longitudinal perspective. As

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[29] This adherence to existing narrative structure in determining a news event's worth as a story was far from absolute. Circa, of course, developed new stories all the time, and several editors said they had no qualms about developing new stories when a news event did not fit into the existing structure. Still, a new story started with zero people following it, so it could be preferable to append an update to existing story where more people would see it, if it could be deemed a fit.

[30] Though all of Circa's stories were listed somewhere on its workflow management software, Trello, several editors lamented the fact that the knowledge of Circa's branch system — its meso-level narrative map — remained tacit, institutional knowledge, making it easy for new editors to miscategorize stories.

contributing editor Ted Trautman explained, Circa's "atomized" structure was initially primarily meant to save readers time by eliminating the background information that had to be repeated with every article in an ongoing story. But almost as a byproduct, that structure ended up emphasizing the continuity of stories over time and the connections between events as parts of larger narratives. "When we are succeeding, what we're doing is presenting a given event as part of a larger chain of events, rather than just something that came out of nowhere," he said. By forcing events to be connected into ongoing stories, Circa foregrounded the element of time in news narrative, consciously lifting each event into the meso-level arc of a story extending through time.

Like the consideration of whether a news event fit into one of Circa's existing stories, Circa editors also considered whether a story had the possibility of being updated over time as an element of its news value. This was the case with Circa editor-in-chief Anthony De Rosa's decision to create a story out of a *New York Times* investigative piece on animal abuse at a publicly funded Nebraska meat research center. The article seemed to me to be an odd choice for a Circa story, and when I asked De Rosa about why he chose it, he named as his second criteria (after the fact that it was federally funded animal abuse) the likelihood that the story would have an interesting update because of a government response to public outcry. Given the distinct feature of Circa's design — that users could follow stories and get incremental updates on those stories without repeated information — a one-off story with no follow-ups was essentially useless. The only real stories for Circa, then, were the ones that continued over time, or at least showed a real possibility for it.

This view of stories as fundamentally existing over time entailed an important and fairly specialized skill for Circa editors — the ability to anticipate whether a news event would spur future update-worthy news events, and what form those events might take. This skill was considered a learned and prized one by Circa editors; one pointed to the relatively number of un-updated stories he developed as a new editor (compared to his

lower number now) as evidence of the improvement of his news judgment over time, and another said some of his most satisfying moments as an editor were when he found updates to long-untouched stories. The skill involved understanding how similar stories have developed over time in the past, then perceiving the particularities in the current situation that might lead it to play out in a distinct way. It was also extremely helpful in understanding where to place a particular update. Circa's Adrian Arizmendi gave an example of the usefulness of this skill in his decision of what to do with the 2015 brinksmanship surrounding the U.S. House of Representatives Republicans' threat to defund the Department of Homeland Security over President Obama's executive actions loosening immigration restrictions. As the conflict about the threat began to escalate, Arizmendi had to decide whether to keep it within the story on the immigration executive actions or branch it into its own separate story.

> I thought about it, and I thought about patterns that have come up in the past, and had to think about the way sort of these things develop over time, and I made the call to branch a story. … And luckily, I'm glad I did, because it's turned into its own monster, with its own questions and its own players and its own everything, and its own timeline. And I feel like had we kept that story with the immigration storyline, some of the core points or elements or units of the immigration storyline could have been lost.

A major part of Arizmendi's consideration of the nature of the Republicans' funding threat as a news story, then, was its expected arc over time — that is, in the future, not simply in the past. Because of the encompassing importance of meso-level narrative arcs as an organizing device for Circa, every news event its editors consider had to be evaluated in two dimensions: In the "spatial" dimension of its relationship to a set of interconnected ongoing stories, and the temporal dimension of its expected development over time. Circa's atomization of news narrative paradoxically extended the depth of its

commitment to seeing news in broader, meso-level narrative terms far beyond that of traditional journalism or even its fellow aggregators.

Meso-Level Narrative and Story Angle Selection

Beyond Circa, however, the work of understanding news events as part of broader story arcs is particularly central to aggregation, in large part because of the secondary nature of their work and aggregators' desire to differentiate themselves in light of that. Because aggregators are not originating the stories they write, they are typically unable to initiate a meso-level story arc, and so they must always consider where their own account is arriving within a pre-existing arc. Aggregators may not always give much consideration to this arc; they could simply view a news story they aggregate as something pre-existent, merely dropped in their lap for them to summarize and push back out. But such an approach would result in a story that is wholly derivative, that lacks the differentiation aggregators so highly value for their economic viability and professional identity. In order to properly differentiate it, aggregators must have a fuller understanding of a story as an ongoing arc, which includes knowledge of who has written about it from which angles, and how perception of the story might be expected to evolve.

This newsworthiness is wrapped up in the perception of where a story is within its narrative arc. This is the case, to an extent, for virtually all journalists; an editor might give lesser play to a subcommittee vote on a legislative bill, not because the issue itself is not newsworthy but because she perceives the event as being a relatively unimportant part of the narrative arc of the bill's progress. But for many aggregators, the media coverage of a story is an inextricable part of its narrative arc, beyond simply the events themselves. For VidNews, this conception of narrative takes the form of newsworthy stories being defined in terms of the range of media perspectives regarding those stories, as noted earlier. For one social news site editor, it means consciously seeking to counter or put a twist on the perspectives that might be surrounding a story that's beginning to go viral, "pushing conversation forward and thinking about counter-narratives … and

[about] what else you can add to the conversation and rethink the way that a lot of other people are telling these stories." This is especially the case with non-breaking news, or if a news organization is arriving relatively late in a story's arc.

In this way, it bears some resemblance to what traditional journalists have called "second-day stories" — stories that take a broader or more analytical angle on a news event after the organization has reported the basic, immediate facts about that event. The difference with these aggregated stories is that quite often, there is no "first-day story." They have arrived too late to have provided any sort of basic facts and instead consider a story's narrative arc in terms of the way it has been covered elsewhere and how they find a way to spin it differently.[31] In addition, with each of their stories aggregators enter an information marketplace that is much more crowded and homogeneous than previous media environments. Not only are all of their competitors writing about the same issue or the same events, but they are often using the same (published) sources, making an account's place, both temporally and rhetorically, along a story's narrative arc and its ability to add to that arc constant concerns in the push to stand out.

It is difficult to overstate how central this narrative conception was at VidNews. The organization's primary goal is to cover news events; it is not a media criticism site like the *Columbia Journalism Review* or Media Matters for America. But because of both their intrinsic reliance on other media sources and their desire to differentiate themselves from those sources and their fellow aggregators, to cover a news event was to cover the media coverage that formed that event's narrative arc. This colored the way VidNews' journalists saw news events in the first place; they were not simply events, but mediated narratives around events. The description of VidNews' content director of the company's

[31] A comparison could be drawn here to the narrative plotting of newsmagazines in the traditional news cycle, as they rarely in their pre-web days provided basic initial facts on heavily discussed news stories and instead had to assess a story's newsworthiness and their coverage of it based on its place in a longer-term narrative arc. Unlike aggregators, however, newsmagazines at their best were able to introduce stories to the public and begin their narrative arc through well-reported articles on pertinent, non-breaking public issues.

story form is essentially a textbook definition of what the meso level of narrative looks like in news production:

> I think to really do the [VidNews] treatment justice, what we need to do is look where this story is coming from and look where it's going. So you have this trajectory of the story. Not just, like, a story arc, but a trajectory of coverage. So we can kind of see who was the first to report this, who picked it up. You can kind of start to see that as you look around on the web, and see what you can tie together from that.

For many aggregators, understanding whether a set of events constitutes a story and what kind of story it is involves this double-story-arc conceptualization this VidNews editor described. It entails emplotting not only the news events themselves into a narrative arc, but building the coverage of the events into a second, parallel arc that is considered in conjunction with, and as an integral part of, the first. Both arcs together constitute the meso level of narrative conceptualization of news for aggregators.

News Judgment and Narrative

The ability to envision both of these narrative arcs and be able to plot both newly reported news events and one's own stories on them emerged as one of aggregation's primary skills in this study. It was often referred to in terms of news judgment, as in this statement by Circa deputy editor Evan Buxbaum about how its editors determined what stories rose to the level of an update: "There is no scientific equation for this. It's totally based on news judgment and having a kind of savvy understanding of our users and what they expect and what ultimately — we use the term 'pushes the story forward,' 'drives the story forward.'"

News judgment was cited by numerous aggregators as one of the foremost skills involved in their work. What was particularly interesting was the way aggregators described news judgment, a famously inexpressible concept for journalists (Ericson et al., 1987; Tuchman, 1978). In some cases, aggregators characterized news judgment

similarly to the ways journalists historically have — the ability to know which events are important news, and which accounts of those events are credible. But beyond this, aggregators also described news judgment in terms of the ability to understand the larger arc of a news story beyond any immediate events and order one's own coverage of a story based on where it fell in that arc. David Cohn, the executive producer of Al Jazeera's AJ+ digital news initiative and Circa's former chief content officer, described news judgment as having these two levels:

> I think that's the new part and interesting part that other organizations and other people have not had to deal with in terms of news judgment. The most basic thing, by news judgment, I mean, what is important to our audience and why? … I think anybody at any organization has to have that critical news judgment of what is important for my audience and why. But the second thing that you just described,[32] which is also something I have to do, which is, does this fit already with something that is ongoing, or should I turn this into a new story?

This second level of news judgment corresponds closely with an understanding of meso-level narrative. For Circa (and AJ+) in particular, it involved an ability to recognize that a news event would become an ongoing issue, and for many other aggregators, including those at VidNews and SportsPop, it is primarily an understanding of how media coverage of an event or issue has developed, and what type of angle might be the next natural progression in that coverage. In both cases, news judgment represents an understanding of the broad narrative arc of a news story and its coverage. It is a skill that many other journalists possess as well but one that seems to be heightened among aggregators, because so much of the narrative conceptualization of that work revolves around that broader narrative trajectory, rather than the narrative conventions of a single account.

[32]I had asked Cohn what he meant by news judgment, and whether it was "in what you talked about earlier, being able to get a piece of video content and know, 'Oh, this applies to this story'? Or 'Oh, let's just create a new story, because I think this is going to develop differently'?" as opposed to something else.

MICRO LEVEL

Comparison to Traditional News Narrative

While aggregators produced several notable distinctions from the way traditional journalists have conceived of news as narrative at the meso level, their narratives were surprisingly similar to those of traditional news at the micro level. Numerous aggregators said their story form was essentially identical to the classic inverted pyramid found in traditional newspaper and wire reporting, only shorter. Even at SportsPop, with its casual tone aimed heavily at web-savvy millennials, writers had to be schooled in traditional news story form. One SportsPop writer who came to the site from music criticism described it as his biggest challenge there: "For me, it was back to a crash course in day one of journalism school — inverted pyramid, who-what-when-where-why." As SportsPop's editor characterized aggregated stories, the only difference is in how the information was gathered, not the story form itself:

> The way I look at curation, it's no different than the Journalism 101 that we all learned when we were in our freshman year of college, where it's, you've got your lead, you've got your transition, you've got your quote. But your quote is someone else's work, essentially.

At SportsPop, this may have been partly a function of the site's affiliation with a traditional news organization; its staff sat in the midst of a large newsroom — literally, at a row of desks near the center of a wide-open sea of desks that spanned almost an entire office building floor — in which most of the other journalists were writing stories in traditional news narrative style. But those outside of professional newsrooms also said they emulated modern news narrative formats. BuzzFeed breaking news reporter Jim Dalrymple II said BuzzFeed's news division's style was largely patterned on the objectivity-based newspaper writing style: "If I'm writing a 300-word story for BuzzFeed on some sort of crime or something like that, it's going to be pretty much the exact same thing as I would do at a newspaper."

Even at Circa, with its premise of breaking down the article as the atomic unit of news by slicing it into its granular parts, when its 300-character factual "points" were read together as a whole story — as a new reader of the story was intended to do — the stories bore a striking resemblance to a classic inverted-pyramid, neutral-tone news narrative. This was by design: Circa's feature of sending new information on ongoing stories was meant for those who had chosen to follow that story, but the story itself was meant to orient new readers, and the best way Circa's editors knew how to do that was through the inverted-pyramid-based style that has dominated newspaper and wire service journalism for the past century. Circa's editor in chief, De Rosa, characterized that adherence to traditional style as partly a concession to readers' familiarity with it: "We still want to make it as normal a story for a regular reader as we possibly can," he said. "It would be silly for us to try to create something that people don't recognize as a traditional story, because then people wouldn't understand what we're trying to get across."

Is this adherence to the traditional narrative formats of news — even among those who have built their professional reputation on breaking those formats down — a concession to the enduring effectiveness of the modern news story as a format for communicating information, or simply a testament to the difficulty of change within a professional mindset? Elements of both are present, though the latter might be a stronger explanation. The inverted pyramid is indeed an effective way to communicate factual information efficiently, and that efficiency is of the utmost importance to aggregators whose work is defined by the compression of information. But as we will see in the following chapter, the norms of professional journalism maintain a strong hold over aggregators, even as they strive to forge their own professional culture, and those norms extend to a writing style that is read as neutral, factual, and authoritative. Many of the aggregators in this study either were housed in or came from professional news

organizations, and retaining at least some variant of the inverted pyramid-based narrative style was a tangible way to maintain that professional orientation.

This style was not universal, however. At SportsPop and elsewhere, aggregators associated this inverted pyramid style with hard news stories and reserved a breezier style and more flexible form for lighter stories, just as traditional journalists have tended to do. Writing back-to-back stories about professional basketball players, one SportsPop writer led one piece about the lack of entertainment options in a player's city with a paragraph of casual opinion, and wrote the next on a player's injury in a straight-news tone. When asked about the difference in approach in the second story, she said, "I'm making it more newsy because it's so serious." The tie of narrative style to news topic was strong enough at SportsPop that the site generally eschewed stories (such as the murder case of former pro football star Aaron Hernandez) that it felt it could not reconcile with its breezy, peppy variant on traditional news style.

In another significant divergence from traditional news style, writers from SportsPop and two social news sites said they consider visual and social elements such as embedded social media posts, video clips, and animated GIFs to be embedded along with text as a core part of the story structure itself. At SportsPop, this was especially the case when a visual or social element was considered to be the news about which an aggregator was writing; when a SportsPop writer wrote a post about an image, GIF, or video clip (which was often) that element was the central part of their narrative, and text was limited to a lighthearted comment or background information about the visual element.

These changes have a potentially crucial influence on perceptions of narrative form: BuzzFeed's Jim Dalrymple II said that while his base style is rooted in the inverted pyramid, he's begun thinking differently about narrative form than he did during his days as a newspaper reporter:

> I don't think of it just as words. Like, I'll think of it just sort of as, here's a short paragraph, and now I need an image, so I go through and I find an image. And so it's almost — it's like writing and photo editing are merged into one thing.

For Dalrymple, the visual elements are no longer a supplement to the textual narrative; they are part of the textual narrative itself, integrated in a way more like video news than traditional print-based news narrative. As an aggregator whose product was video, VidNews' narrative form was necessarily built around visual elements, but its journalists, many of them veterans of local TV news, reported greater narrative creativity as one of their distinctive elements, as one producer described: "[TV news] tends to be more chronological, whereas ours — we can be chronological or we could totally go all over the place. We can work backwards. We can … make it work for however you think the story is best told." Aggregation's basic narrative form, then, combines the fundamental inverted pyramid-based narrative elements of traditional news with a more thorough integration and creative juxtaposition of visual and social elements that results in a greater range of hybrid narrative possibilities.

Aggregators' Conception of Their Narrative Forms

While aggregation might be set against the practice of crafting narrative presentations of news as two activities on opposite ends of the journalistic spectrum (Neveu, 2014), most of the aggregators in this study considered their work to involve creating narratives or telling stories, at least most of the time. There were several notable exceptions, however, and it is worth addressing them briefly before moving into the different ways in which aggregators conceived of their work as narrative. Several writers had quite limited views of the role of narrative in their work, seeing their job as simply to present the subject of their posts as quickly and simply as possible while virtually vanishing as a mediator of that content. Several writers at SportsPop talked about their jobs as simply "getting out of the way," especially when posting video and social content. "If I'm posting a video of [professional football player] Marshawn Lynch in high school,

people are coming to watch a video of Marshawn Lynch in high school," said one SportsPop writer. "They didn't come to hear me." His comments hint at the twofold rationale of aggregators' devaluation of their own narrative role. The first is an acute awareness of the audience's lack of attention, particularly as they consume content on mobile devices, and their limited tolerance for narrative indulgences. Under this logic, expressed by several people at SportsPop, viewers come for a very utilitarian purpose — "to watch a video of Marshawn Lynch in high school" — and will leave if the post does not immediately deliver on that purpose. The second is a recognition that the aggregator is still a mediator and a belief that the focal narrative being presented is still someone else's, and any narrative the aggregator constructs is gratuitous to that central narrative.

Most other aggregators, however, saw their work as either primarily or entirely existing as a form of narrative, or of storytelling. Several asserted that all journalism was storytelling, and aggregating was simply another form of that practice. One breaking news reporter at a national news organization argued that constructing a narrative was the main element that essentially kept aggregated material from being worthless drivel:

> I think it's even more imperative to make a narrative out of it [in aggregation]. Otherwise it's just kind of like — why are you even — if this is not an actual story, why does it even make sense to aggregate it, in terms of your time?

But when I asked aggregators what made their work narrative and in which cases it took on more narrative qualities than others, it became clear that aggregators were operating on widely varying definitions of what constituted narrative in their work. I will outline three of those conceptions of narrative in aggregation: Narrative as logical flow, narrative as context, and narrative as the manifestation of reporting.

Narrative as Logical Flow

For some aggregators, their work was considered narrative insofar as it flowed logically from one point or piece of information to the next, guiding the reader to an understanding of an issue or set of events. This was especially the case for Circa, where a

concept of narrative as logical flow was a significant factor pushing its narrative format to resemble that of inverted pyramid-style writing. All of Circa's editors talked about reading stories top-to-bottom with a new reader in mind in order to ensure that they went to beyond a simple collection of atomic "points" to form a cohesive account of events, and they called this cohesive account a narrative. Circa contributing editor Ted Trautman, who did much of the app's copy editing, described his editing approach in those terms:

> Can my mom, who's not in journalism — can she sit down and not have to make logical leaps or look things up? I mean, does this flow in a way that makes sense to a non-professional news person? And so in that sense, I think that there is a storytelling element.

This was a key concern particularly when Circa editors republished stories with updated information. They were careful to evaluate the logical flow of their stories as they continued to grow with new information being added, lest they become a sort of Frankenstein's monster over time.

This vision of news narrative as logical flow grew out of the tension in Circa between its desire to break news down into granular atomic units and its desire to still retain some narrative qualities. As David Cohn, Circa's founding editor (now at Al Jazeera's AJ+) explained, its story structure emerged from a consideration of those two factors together; without the narrative element, it would have been simply an updating list of facts, and without the atomic element, it would have been simply news stories grouped by topic. The solution Circa's founders landed on was a set of granular "points" often consisting of a single fact bridged together into a cohesive news "story" (initially called a "storyline") but able to be split up into individual units for returning users. The attempt to string together a set of topically related but discrete facts into a cohesive narrative unit is essentially the same task as writing an inverted pyramid news story. It makes sense, then, that Circa's editors considered their stories to be very similar to traditional inverted pyramid-style story structure, and that their conception of their work as narrative was

similarly thin. Scholars have debated whether the inverted pyramid is better characterized as a logically flowing series of propositions than a narrative (Matheson, 2010; van Dijk, 1988), so it is fitting indeed that Circa's editors considered the two to mean essentially the same thing when it came to their work.

Narrative as Context

Other aggregators considered context the fundamental element that made their work narrative. This came to the fore at VidNews in particular, where the senior editor described the organization's mission as being to "capture the context and connections between our sources and the events in the news." For VidNews, the idea of context was closely tied to an understanding of the trajectory of a news story as described above in the meso-level section; its journalists considered the addition of context the primary asset they could add to the flood of information around a major news story. They considered the addition of context the attribute that made a story a story, so much so that it pervaded even the sense of which stories were newsworthy, as one producer described:

> That's the first thing I think of, usually, when I'm looking for a story — something that's not super specific, but also we can use it to explain parts of maybe a bigger situation. … That's kind of the de facto news story for world stories, is that it's always something smaller, part of this bigger conflict.

Many VidNews stories followed either this template for context as a form of narrative — using a single event as a window into a larger issue — or the template of comparing and analyzing media coverage of an event or issue. But virtually every VidNews story incorporated context in some way, as that was considered a crucial difference between their own (narrative) work and a rote, derivative recounting of events.

Beyond VidNews, however, context meant wildly different things to different aggregators. For one SportsPop writer, like VidNews, context consisted of a connection to a larger event or situation, a distinction clarified through her juxtaposition between two 15-second videos she had posted. One, featuring college football players dancing in the

locker room after winning the national championship, was a story, she said, because it required the context of knowing about the football game to be fully understood. The other, a video of a college football player making trick-shot field goals after practice, was not a story because it tied into no larger narrative context. Others differed in their definitions of context: For one breaking news reporter at a national news organization, context involved packaging a variety of information about an issue in an explanatory way. For an editor at a social news site, it meant building an explicit argument for the issue's importance, and for one sports breaking news site, it often simply meant adding statistics. For several aggregators, context involved adding information on past coverage of a person or issue involved, which could involve simply adding links to past stories, or in some cases, a more complex reference to past events. Craig Calcaterra, who runs NBC Sports' aggregative baseball blog Hardball Talk, described context partly as creating exaggerated personae for players based on previous events (such as injuries or personality quirks), which for his regular readers triggers a callback to past coverage. In all of these conceptions, however, context involved connecting the news event with a broader issue or body of information, and in that connection lay the creative work of building a narrative from a singular news event.

Narrative as the Manifestation of Reporting

Several aggregators also closely associated narrative with the work of reporting; to them, narrative was essentially the output of reporting. In some ways, this may have been a product of conflation of terms: Reporting equaled journalism (a connection that I will explore further in Chapter 8), and journalism equaled storytelling, so reporting equaled storytelling. "I think with reporters and storytellers, those are two very, very similar descriptions," asserted one VidNews producer. This connection was reinforced among those who did both aggregated and reported work. Often but not always, these writers' reported work resulted in longform stories with more obtrusive and extensive narrative devices, so their concept of news narrative was closely tied to the type of longer

stories that involved on-location reporting. Fittingly, these aggregators typically viewed their aggregated content as less narrative than their reported pieces. A SportsPop writer summed up this perspective succinctly, "If it's like a first-person encounter, or a properly reported story, I do think that that is a narrative." He characterized his own recent reporting from the Westminster Kennel Club Dog Show as telling stories, even stories as simple as which dog won.

The connection between reporting as a form of work and narrative as a form of news story may initially be difficult to discern, but the disdain for the work of aggregation expressed by one breaking news reporter helps explain the difficulty reconciling aggregation with storytelling:

> You feel more like a hamster on a wheel than you do like a narrator. It's an assembly-line kind of operation. You get something, you boom-boom-boom package it, boom-boom-boom, input-output kind of a thing. With reported pieces, you really are telling a story, because it's your own story. But with aggregating, you're just repackaging somebody else's story, and you don't really have ownership over it.

For this aggregator and others, reporting allows for a narrative to be constructed because it confers ownership over that story. The work of witnessing a news event firsthand or interviewing a source directly gives the reporter a sense that they are discovering this story and that it is theirs to tell as they wish. Aggregators, however, are continually confronted with the fact that the story they tell is not one they originated. They do everything they can to re-present it creatively — by integrating background material as context, by incorporating visual and social elements, and by accounting for its place in the story's broader narrative arc — but the raw material with which they work is not theirs. That creative narrative presentation should not be discounted; it is a crucial part of aggregators' professional identity and their differentiation from other media workers. Still, the fact that they are often creatively re-telling a story told first by someone else

represents a profound limitation of their narrative agency, as well as a threat to their professional identity.

CONCLUSION

With its two-paragraph articles and animated GIFs produced for short attention spans and mobile devices, aggregated news might seem to represent a breakdown in traditional journalistic story forms and, more broadly, the role of narrative in helping journalists understand and communicate news. But aggregated news and shortform journalism built around an atomic unit of news are more derivative of traditional news forms than a departure from them, more evolution than revolution. Though Circa positioned its atomic narrative form as the successor of the news article, it often ended up being bound to a form much like the traditional inverted pyramid, in part because both its journalists and users had been so thoroughly conditioned to that form, or variants of it, as the logically coherent way to structure textual news accounts. And far from being a series of discrete, disconnected chunks of news, Circa's distinctive narrative structure pushed its writers to think of news events in more deeply and broadly narrative terms than simply the narrative contained within a single article.

Instead, the major narrative shift in aggregation is to move the primary level at which journalists consciously consider news narrative up from the micro level of the individual story form to the meso level of the broader arc of a developing news story. Compared with traditional reporting-based journalists, aggregators tend to be less concerned with and more ambivalent about the role narrative structure plays in their individual stories. But at the same time, they exhibit a heightened concern with the arc of news issues and stories as they develop and are covered among various media, and particularly where the arc of that story might intersect with the distinct asset that their news organization is poised to contribute to it. This is a concern traditional journalists have shown as well, but aggregators show a greater inclination to conceive of a news narrative as something that is not contained within a particular text, in part because any

given text they might produce may be too insubstantial to be considered a vehicle for any self-contained news narrative. This shift was evident most strikingly and distinctly in Circa through its atomization of news and "main branch" system of broader stories, but it manifested itself across the organizations I studied, as aggregators positioned their work by considering at a fundamental level where an event fit into a broader narrative arc that included not only past and anticipated future events, but also the coverage of other media (most notably in the case of VidNews) and the reaction on social media (in SportsPop's case).

This shift from the micro to the meso level is largely the result of two factors, one economic and one professional. The economic factor goes back to most aggregators' basic business model — to maximize traffic and sharing. A piece of aggregated content that does not treat a story as part of a larger arc of related events is likely to end up simply a rehashing of the sources it aggregates from and is thus likely to be buried by those sources — which came first, after all — in traffic, social conversation, and search engine placement. As the second (or third, or thirtieth) organization to arrive to the story, an aggregator's best chance at garnering substantial traffic and attention is emphasizing an element of the story that has not yet been addressed and anticipating the next developments in its narrative arc. The professional factor is related, in that writing such a derivative rehash that results when narrative is not considered primarily on the meso level is seen as mindless, monotonous, professionally inferior work. As we will explore further in the next chapter, absent the professional validation that comes from on-the-scene reporting, aggregators relish every chance to exercise substantial news judgment. Considering news narratives at a larger, meso level is a means for aggregators to incorporate that professional judgment in a small but substantial way, serving as a source of professional fulfillment and even pride.

Modern journalists, as scholars have argued (Jacobs, 1996; Manoff, 1986; Roeh, 1989), have viewed stories as something inherent in the world, and news stories as pre-

existent entities that they only need to discover, extract through reporting, and properly tell. As they look to the social world for news narratives, they "receive the world in a 'storied' way" (Jacobs, 1996, p. 381). Aggregators understand the world this way as well, but more than that, since they look to other forms of media for news stories to tell, they receive the media world in a particular storied way. The primary way in which they see narratives in their mediated world is not within individual news accounts, but across those accounts, as a broader narrative emerges and plays out as a news story develops throughout a news cycle. To many aggregators, news events themselves do not constitute a complete narrative, as they might for a traditional journalist. Instead, the full breadth of a news narrative is composed by both the events and the coverage of those events by other media sources — and, inevitably, by themselves. The task of understanding news as narrative is thus incomplete without a firm comprehension of the way a story has developed beyond the events at hand, and the way media coverage has played into that development.

Despite the primacy of this meso-level conception of news narrative, many aggregators do have an understanding of their work as narrative on the micro level, in terms of story form. This understanding is relatively thin, however. There is little or no place for plot, character, rising and falling action, or any of the elements that tend to constitute narrative in the literary sense. In its place are context, logical flow, and the linking of sequential events so that some meaning may be derived from them. These are indeed narrative functions — in fact, the latter in particular is possibly the core narrative function (Barkin, 1984; Kozloff, 2005; White, 1987) — but only rarely does narrative in aggregation develop more depth or complexity than the juxtaposition of past events with present ones. Aggregation's form and professional lineage both work against this depth of narrative within individual stories. Its form is built around concision and efficient delivery of information, hardly the impetus for rich narrative elaboration. And its professional practices remain established on the practices of modern professional

journalism, which has also tended to privilege the ability to quickly and authoritatively communicate factual information rather than the ability to craft a rich narrative.[33] News narrative at the individual story level is certainly not eliminated, but it is attenuated by the fundamental orientation of aggregation's form and its professional practices.

This shift from micro-level to meso-level narrative also entails a parallel shift in the nature of news judgment. While its definition has always been amorphous, news judgment has typically been characterized as the ability to determine which facts or events are important or interesting enough to be communicated as news, as well as the ability to gauge and weigh the credibility of news accounts (Ettema & Glasser, 1998; Gans, 1979; Tuchman, 1978). In aggregation, news judgment takes on a broader and more complex role, moving toward a more expansive cognitive skill that encompasses the knowledge of where a news story is located within its arc over time, what its future trajectory might be, and, especially at Circa, how it relates to other adjacent stories. This skill has been present in professional journalism for quite some time, though not necessarily identified as news judgment by scholars. It becomes a more central part of aggregation, however, because of the primacy of meso-level news narrative there, and because the main realm in which journalists have exercised news judgment — accessing sources through reporting and verifying incoming information from those sources — are downplayed in aggregation, leaving news judgment as primarily understanding a story's place within its narrative arc. This form of news judgment is how Circa's editors understood where a piece of news might fit in the organization's sprawling web of news stories, and how other aggregators know what type of all-important context is appropriate to add. This is a substantially different skill from knowing what events are newsworthy and what evidence is sufficient to recognize as fact, and it would benefit us to deepen our

[33] This has been less the case, of course, in the story model of journalism than the information model (Schudson, 1978). Different forms of aggregation seem to draw from both models; the emphasis on efficient delivery of factual information is closely tied to the information model, while the tendency in some forms of aggregation toward sensational headlines, soft-news and weird-news topics, and heavy use of images recalls the story model.

understanding of news judgment enough to distinguish between its classic manifestations and aggregators' narrative news judgment.

Narrative is far from broken down by the proliferation of bite-size nuggets of easily digestible information that aggregation produces. Instead, it is being built up — not necessarily becoming more important, but being broadened, reinforced, and made more complex. Aggregators still perceive and communicate the social world in the form of stories, but as the individual accounts they produce become shorter, the stories that connect those accounts become larger and more broadly encompassing.

Chapter 8: Aggregators and Contested Professional Identity

After examining the practices and forms of aggregation in the previous two chapters, I turn in this chapter to the fraught relationship between aggregators and the professional journalistic field as a whole. In doing so, I address the research questions posed in Chapter 2: The nature of their work in an organizational and professional context, how aggregators perceive their professional status relative to journalism more broadly, and how they are developing and expressing their own professional norms and values. As part of this inquiry, I explore the way aggregators perceive and negotiate the material and occupational conditions of their work as well as their use of ethical standards as a means of articulating their own professional autonomy and value.

I find that aggregators' professional identity is indelibly marked by the marginal status conferred on them by the profession of journalism more broadly. Aggregators are deeply ambivalent about their own professional status, often viewing their own work as inferior and secondary to the work of traditional, "shoe-leather" reporting — at times even a source of shame — but also seeking to be perceived as professional equals to those who do that reporting work. As part of those efforts, aggregators have developed a fairly uniform set of ethical principles built around attribution and adding value to the content they aggregate, and have policed against producing "clickbait" as a dubious ethical set of practices that falls outside the practice's professional boundaries. Befitting this ambivalence and emerging but uncertain professional identity, many aggregators display pride and satisfaction in doing their work well, but find their greatest professional fulfillment in doing traditional reporting work and producing "original" content in addition to aggregation — work, that is, that diverges from their core tasks of aggregation. I will approach this analysis in a three-part structure: First, a description of the nature and conditions of aggregation work and its chief skills; second, an examination of the emerging professional norms and ethical values of aggregation; and finally, an

exploration of aggregators' relationship to professional journalism and their attitudes about their place within it.

AGGREGATION WORK AND SKILLS

The Nature of Aggregation Work

The material and occupational conditions of aggregation work share much in common with those of online journalism more generally; both are characterized by a flexible workforce, continual urgency, and a torrent of digital information (Anderson, 2013a; Boczkowski, 2010; Boyer, 2013; Usher, 2014). This similarity is not surprising, given that an increasing amount of online journalistic work consists of aggregation — the two forms are overlapping with greater consistency. Still, it is fruitful to point out the particular characteristics of aggregation work, in part to add my observations to what is becoming a scholarly consensus on the hurried and screen-based nature of online journalistic work, and to highlight the points where aggregation might diverge.

Though one must be careful making generalizations regarding a practice that takes place in such a diverse set of environments, the aggregation work in this study tended to be done by a young, flexible workforce, but one working within relatively hierarchical organizational structures. Though I did not ask participants' ages, it was possible to deduce a reasonable estimate through their descriptions of their professional background, matched up with biographical information they had posted about themselves online on sites such as LinkedIn. (Several people volunteered their ages during the course fieldwork or interviews.) About two-thirds of the aggregators I talked with were under 30, a perception that matched some aggregators' view of their own colleagues. "It's really, like, an under-25 kind of game, under 27," said one breaking news reporter at a national news organization, who was 24. In many places, aggregation was considered entry-level work or close to it; with a few exceptions, most of the non-senior editors at Circa, SportsPop, and VidNews had about two years or less of full-time journalism experience when they were hired. At VidNews, the almost universal youth of the staff

gave the newsroom an abnormally energetic and cheerful feeling, without much of the cynicism and gallows humor that tend to characterize journalists' interactions. At SportsPop, the youth of its staffers stood out against the more middle-aged mixture of journalists that surrounded them in the newsroom, even as the two groups interacted fairly freely. One notable exception to this youthful emphasis was *The New York Times*, which has staffed its aggregative Watching and NYT Now features with newsroom veterans, many with at least a decade of journalism experience. "That's a very expensive approach, but it's also paid off in a lot of ways," said NYT Now staff editor Stacy Cowley, citing the app's record of accuracy and careful approach to publishing.

The news aggregators I observed were also a relatively flexible workforce. Even though Circa, SportsPop, and VidNews operated out of central newsrooms (in Circa's case, two small offices in San Francisco and New York), all three had multiple full-time staffers who worked remotely from home. And because all three organizations posted content at least 18 hours a day, they all had several journalists working both early-morning and late-night shifts. (Both of these attributes were common among the organizations represented in interviews as well.) This made for newsrooms that were occasionally sparse and often quiet: Most communication took place via individual or group chat, even among journalists sitting next to each other, so the work environment was hushed, even as communication was virtually constant among workers. SportsPop's silence was interrupted occasionally by directives or outbursts that made little sense without knowledge of the ongoing chat app conversation. At VidNews, most employees worked from the office, and their work required more coordination among the editors, producers, and anchors of its staff, giving the newsroom a bit more of an audible buzz. Despite this workplace flexibility, the editorial structures in these organizations tended to generally resemble those of traditional news organizations. Editors assigned stories to writers, writers pitched stories to their editors, and editors often shot down those pitches and occasionally killed stories, though without the brusqueness traditionally associated

with newsroom interactions. This hierarchical structure bore the mark of a professional journalistic influence, as even organizations that relied heavily on flexible labor had modeled their editorial structure after those of traditional newsrooms as a sort of professional guarantor of quality content.[34]

Speed was also an ever-present attribute of most aggregators' work, a steady urgency guiding their practices and priorities. Several aggregators talked about producing a typical piece in 15 to 20 minutes, and SportsPop and Circa's writers were capable of producing (or in Circa's case, updating) stories that quickly in breaking-news situations. VidNews' turnaround on most stories was expected to be about two hours, which, when accounting for research, writing, anchoring, video production, and two rounds of editing, served as quite a demanding timetable. Some participants described the hectic pace as a challenge, and one suggested that it contributed to a case of plagiarism that resulted in one aggregator's firing. But by and large, aggregators had naturalized the pace at which they worked. "It feels like my normal working speed," said one breaking news reporter, in a sentiment that was echoed by several others. Indeed, I saw aggregators performing tasks at a pace that sometimes bordered on bewildering, but they rarely appeared rushed, except during particular breaking-news situations when the urgency of their approach became palpable.

This speed was naturalized because it was so deeply rooted in their work environments and practices. It helped drive hiring criteria; one editor at a national news organization said he sought to hire journalists for its breaking news team who had a "high metabolism" who did not view the high volume of content they produced as exceptional. It was also embedded in their sense of professional pride. Several Circa editors said they were particularly satisfied in their work when they beat traditional news organizations to a breaking news story (often through the forms of technological presence, such as live

[34] Notably, while an editorial hierarchy was present in these organizations, the division of labor did not extend to traditional beat structures. Loosely held specializations developed based on personal expertise, but everyone functioned as a generalist to a large extent.

video and statements via social media), and in one instance, SportsPop's editors mocked another section of the news organization when it posted a similar piece of breaking news to theirs 20 minutes later. ("They tried the best they could. It was adorable.") One SportsPop writer described speed as one of the primary motivating factors in his work: "What keeps me going is the burning passion to be first and to get the story that people want to read. … To me, it's like a sport — being the first one out there with something kind of gives me the rush." Speed was thus a constant presence in aggregators' work, but rarely an intrusive or unwanted one. Rather, it was endemic to the work, as natural a part of aggregation as reading or writing itself.

Aggregation work also centered on the act of processing a relentless cascade of information pouring into the aggregator's consciousness through a computer screen, an activity Boyer (2013) describes as "screenwork." Aggregators' screens served as the exclusive window to the channels of information they trawled for news stories, as well as their interface for composing and publishing stories, and the medium for most of their communication with their editors and colleagues. With so much of their work mediated through a single screen, aggregators would often become locked in to that interface, with their attention both singularly focused on the single screen restlessly flitting between scores of constantly changing stimuli within it. It was not uncommon for them to have as many as 20 to 30 web browser tabs open, or to be conducting at least three or four simultaneous chat conversations as they sifted through those tabs. My questions for them would often visibly pull them out of this intense screen-based focus, as they would pull back from their screens, take a couple of seconds to collect themselves, and formulate an answer before leaning forward into their screens once again. One editor described the work as absorbing and mentally consuming: "Like no job I've ever had before in my life, you just walk away like a zombie, because you're just focused, straight-on." As Boyer (2013) also found, the ability to maintain this kind of extended focus and master a deluge of information produced its own kind of satisfaction in some cases. Circa deputy editor

Evan Buxbaum aptly characterized the simultaneous sense of both exhaustion and exhilaration at this practice:

> It's like a constant, constant flood of information that you're wading through on a daily basis, which is exciting for people in this business, those of us who get a kick out of this stuff. I mean, it's a flood of information, and you just have to dive into it, and at the end of the day, you're mentally exhausted, and you just go, 'Where did the time go?' And I dig that. I like knowing things, and I like being informed.

As Boyer (2013) observed, screenwork is a practice of both continual action and deep isolation, as aggregators work to process and filter a flood of divergent information by focusing their attention on a single scopic screen.

The speed and information density of aggregation work are both sources of satisfaction, but they can also lend it a feeling of monotony. The work often consists of small tasks performed quickly and repeated often, which along with the intense focus on mediating screens, tends to produce exhaustion and burnout over the long-term. Chris Krewson, who directed an aggregation team at *The Hollywood Reporter* before editing the local-news aggregator Billy Penn, said turnover was a problem on the team because of the relentlessness of the work: "I got really tired of that really fast. … Man, that's a treadmill. I've never worked that hard in my life, and I've never felt more burned out at the end of a shift than trying to ride herd on that thing all day." Though traditional journalists have often characterized their work as ceaseless, it took on an extra degree in aggregation. When the object of coverage is whatever people on the Internet are talking about rather than the bureaucratic institutions around which journalism has traditionally been ordered, the information-gathering lulls are shorter and less pronounced. SportsPop's editor expressed this sentiment well in the wearied aftermath of its coverage of the Super Bowl. As the site's flurry of postgame posting began to abate shortly before midnight and the editor and I stopped to figuratively catch our breath, gather our things,

and leave, I asked him if he would be back in the office the next morning at 6:30 a.m. as usual, and he said he would. I expressed my surprise, but he let out a sigh that told me I shouldn't have been. "The Internet never sleeps, Mark," he said. "The Internet never sleeps."

Many news organizations recognize the monotonous potential of this work and adjust for it by building in on-location reporting assignments to function in part as "breaks" from aggregation. (Said one breaking news reporter at a national news organization: "I don't think that anybody [at my organization] is doing it full-time. I think that they recognize that would be very exhausting.") Several aggregators said the work is more suitable as a short-term form of work than as something around which a journalistic career could be built. This was part of the reason several aggregators saw the natural career progression of journalistic work as moving from aggregation to reporting (as I will explore further below) — because the speed, intensity, and repetitiveness of the work made it difficult for them to imagine it as something they could do for more than a few years.

The Skills of Aggregation

The skills involved with producing aggregated news overlap substantially with those of traditional journalism, though there are some important distinctions. Some aggregators said the skills that made a good aggregator were essentially the same ones that made a good journalist — notably news judgment, the ability to recognize newsworthy stories, to evaluate the credibility of information, and to apply traditional journalistic standards of attribution. News judgment was the most commonly cited aggregative skill by the aggregators in this study, reinforcing Anderson's (2013a, 2013c) finding that news judgment is the aggregator's foremost professional tool. As I have argued in the previous two chapters, aggregators' judgment of which events are newsworthy and which accounts are reliable derive heavily from those of traditional journalism, providing an important point of professional confluence between the two

practices. Still, important differences exist even in this area, as news judgment in aggregation is tied more closely to understanding meso-level narrative arcs.

Another significant set of skills for aggregators lay in the ability to adapt to the conditions of its work — namely, to work quickly and to process massive amounts of digitally mediated information. This is increasingly an element of journalistic work more generally, but aggregators characterized the particular intensity of the speed at which they work and the volume of information they consume as a distinctive element from other forms of newswork. The enactment of speed as a skill is relatively simple: Aggregators need to be able to produce large amounts of work in little time, which involves being able to quickly identify possible stories, find and evaluate sources, write, and manage and publish a story in a content management system. The skill of processing torrents of information was more multifaceted. Aggregators described it in a variety of terms: Internet savviness, knowing when a story or theme is emerging on social networks, using Twitter as a "listening device," knowing how to find obscure information online. The definition that may have struck closest to the core of this skill was articulated by Circa contributing editor Ted Trautman:

> I think that it is a distinct skill to just kind of know what's going on, to be able to just sit in front of your computer and have a sense of where you should be looking, how often you should be checking, who's providing information, and just a sense of what's going on right now. To be able to say, 'Well, this, this, and this are going on right now.'

As one breaking news reporter noted, aggregators hardly have a monopoly on this skill; it is quickly becoming a part of the standard skill set expected of any journalists in the digital age. But even that reporter's own organization recognized its distinctive importance to aggregation. An editor of her breaking news team said the organization closely examined potential hires' news consumption habits and "metabolism" for digital information when considering them for the team. Aggregation work is characterized by

navigating fast-flowing streams of online information and producing news at nearly the same speed at which that information flows, and to be able to do things well is a central set of skills to its practice.

In the production of aggregated news accounts, two skills are particularly valued: Writing concisely and perceptively, and creatively presenting stories visually. Concise writing has long been a valued skill in professional journalism, but in aggregation, this skill is combined with the ability to understand the core elements of a published news text. A concisely written aggregated account is evidence of that proficiency in reading comprehension and news judgment, as Circa editor-in-chief Anthony De Rosa described the skill of writing well: "Being able to figure out how to boil down something that's kind of dense and really complicated to the major points, the 'What are they trying to get across in this story? What's the important parts of it?'"

Beyond writing, aggregators also placed an importance on the ability to present stories appealingly through eye-catching images and creative use of other visual and multimedia elements such as video, embedded social media, and data visualization. This skill was especially prized at VidNews, since its limited ability to use other media organizations' video necessitated creative ways to tell compelling video stories primarily using only images, text, and graphics. One VidNews editor said that rather than being based on scoops like many journalists, recognition within VidNews' newsroom came predominantly through creative presentation: "It's really more about, 'How well did you present this? How creative were you? How engaging was the product that you created? Is this going to interest people who might not have been interested in this topic before?'" At SportsPop, this creativity — especially including the ability to write an enticing headline — was valued as a primary way in which users were drawn into a story. One of SportsPop's co-founders explained that he thought the widely maligned term "content producer" was a better description for the breadth of creative work that went into its aggregators' jobs than simply "writer":

> They're doing so much more than just writing that it's almost like a disservice to say, 'Oh, well, you're just a writer,' or 'You're just an editor,' or 'You're just a producer.' You're actually telling this whole story in a way that is so much better for the user than the way stories were told even five years ago, and you're doing it mostly just by yourself, versus having headline writers and photo editors and copy editors and all these different staff members involved.

As he argued for it, "content producer" encompassed a far broader range of creative skills essential to aggregation — writing headlines, editing photos, incorporating social media, adding appropriate links — than the simple writing that journalists (and aggregators) have often considered the core of their work.

AGGREGATION'S PROFESSIONAL NORMS AND VALUES

As aggregation emerges as a form of newswork — closely related to traditional reporting, but with a degree of inherent secondariness that begins to distinguish it from that practice — its practitioners are beginning a distinct set of norms and values to guide its practice and help justify and solidify its professional status. These values are compatible with and partly drawn from long-held journalistic professional norms, but they have been adapted for the particular work conditions and professional challenges of aggregation, just as the work of aggregation itself is built on but extended from traditional journalistic practice. These values have not been formally codified or universally articulated among aggregators, so they do not rise to the level of fully realized professional norms. But they are professionally aspirational, an important tool for aggregators as they seek to justify their work as ethical, professional, and legitimate amid skepticism from the journalistic field and the epistemological uncertainty inherent in the work itself.

The articulation of ethical values does more than simply prescribe preferred courses of action for more fair, honest, and responsible behavior; it also plays an important role in asserting an emerging profession's autonomy and justifying its social

authority (Singer, 2003, 2015). For aggregators beset by accusations of unoriginality and parasitism, the formation of ethical norms is an important way to assert their similarity to traditional professional journalism and differentiate themselves from other aggregators whose actions they do not approve. Ethics, in other words, allows aggregators to align themselves with the professional actors they see as desirable and distance themselves from the ones they don't.

Ethical Values: Attribution

The foremost ethical principle in aggregation is that of attribution. It was overwhelmingly the first principle cited when I asked interviewees about ethical attributes of their work, and it was often stated in a common-sense, taken-for-granted way, as if the principle was so obvious that it only needed to be articulated as a formality more than anything. One breaking news reporter's description was typical in its tone: "I mean, you have to be respectful, and you have to cite people. And so I mean, that's the obvious part. Like, citing people's work is everything." For some more minimal forms of aggregation — the forms on the low end of the "re-creation of content" scale of the aggregation typology in Chapter 2 — attribution was even more taken-for-granted, since it was embedded in the act of linking itself, which constituted the majority of the aggregator's content. A good example of this type of aggregation came from Gideon Lichfield, who edits Quartz's Daily Brief aggregated email digest and explained why attribution was less of a salient issue for email newsletters: "The nature of the newsletter is that everything is attributed. So we're not writing stories; we are explicitly linking to other people's stories and referring to them. So attribution is just a given."

For automated aggregation news apps, the primary principle was a related one. It was not so much simply attributing information, as this, too, was considered given in the nature of their product, but allowing the organizations from which information was drawn to host readers on their own site, rather than hosting the content within the app's own interface. As one developer of an automated news app explained, this was important

not only because it allowed the originating organization to get the traffic from its work, but also because it gave the user a fuller sense of who produced the content:

> By giving them their own place in the app and their own place for people to follow them and see that this is their content and this is the specific journalist that wrote it, giving that person the opportunity to gain more followers and succeed, I think, was important for us, especially as a publisher.

For most other aggregators, the way to fulfill this ethical obligation was to clearly name the sources for the information they used and to prominently link to those sources. The norm of linking as a form of attribution has been slow to catch on among traditional news organizations (Coddington, 2012a, 2014b), but among aggregators, partly because of their roots in blogging and web culture and partly because of the secondary nature of their work, it was a universally articulated norm whose violations were immediately recognized as ethically dubious. Aggregators' adherence to this principle was also informed by their experiences of having their own work aggregated without credit or a link given; several aggregators explained their devotion to attribution by describing how frustrated they had felt in being aggregated without attribution.

There was only one situation in which attribution norms were relaxed: When information was widely reported at the same time by numerous news organizations, some aggregators saw it as appropriate to treat that information as public facts, rather than the reporting of a particular journalist. This was the case with congressional votes or televised sporting events, which were viewed as information that was "out there," rather than something that needed to be attributed to particular news organizations. This was merely a situational exception to the overall ethical rule that dominated aggregation's values: People deserve to be credited for their work with a link and attribution, and ethical aggregators don't look for ways to skirt that attribution.

Ethical Values: Excerpting

A second major ethical principle regarded the excerpting of content: Aggregators should keep their excerpts of others' works to a minimum in order to keep from stealing others' content and to preserve the originality of one's own. Several aggregators said they avoided long block quotes of other articles, or tried to keep from giving away the heart of a long story. This principle was much more ambiguous than that of attribution, however, because the nature of aggregation is to rely on others' accounts as material for one's own. The work of aggregation is, on some level, inherently unoriginal, and most forms of it inevitably involve either quotes or close paraphrases of other sources. Several aggregators acknowledged the inevitability of quotes in their work but weighed the appropriateness of their quotes against the other ethical principles of attribution and adding value, which I will address below. One breaking news reporter at a national news organization captured this ethical ambivalence in his description of aggregating lengthy, well-reported stories:

> There's so much work that has gone into it, and boom, I give it four paragraphs. But if I link out, it also means that many more people have access to this great piece of reporting and hopefully directs money back to the source itself. So it's ethically complicated, I think.

Excerpting rose to the fore as an ethical principle at VidNews, largely because of the heightened legal concerns with using video excerpts rather than quoted text. The internal rules for excerpts were obviously deeply ingrained and were repeated to me by several of the journalists I observed there: A maximum of 12 seconds of video from any source; no cold-opens with video from another media organization; no use of social media images without permission from the creator; and no stories that relied on only one source.[35] VidNews' senior editor said the organization had begun to emphasize these

[35] The exception to these rules was video from TV stations owned by VidNews' corporate owner. That video could be used for cold-opens, excerpted for longer than 12 seconds, or used as a single source because on the corporate level, relying on it was viewed as essentially relying on VidNews' own work. "It's like us retelling ourselves," said VidNews' copy editor.

principles a couple of years later as part of a shift toward more responsible and "valuable" aggregation (which will be discussed further below), an emphasis that was heightened when it was bought by a major traditional media company whose legal team suggested a further tightening of its excerpting and attribution standards. VidNews' editors often made decisions about appropriate excerpting internally, though they occasionally consulted with the legal team on particularly difficult cases. VidNews employed a full-time copy editor, a substantial part of whose job consisted of ruling on the appropriateness of videos' excerpts.

An example illustrates the range of considerations that went into decisions about excerpting at VidNews: During the bustling mid-morning peak of her shift as VidNews' copy editor, Melissa[36] is reviewing a story on a police officer who had bought baby formula for a shoplifter who had been caught stealing it. The story is based on a local TV news report, and it abides by all of VidNews' rules for excerpting — multiple sources, fewer than 12 seconds from the TV news report, an original cold-open. But as she reads the script, Melissa is concerned about the quote of the officer, taken from the TV news report; at two sentences, it seems like a bit too much to excerpt. She tells the producer (who's working from home) via Google Chat to trim it, and after some mock over-the-top protesting by the producer and a back-and-forth exchange about which part to cut, she asks for the entire TV-news clip to gauge whether the producer has taken too much of the story. As she puts on headphones and watches the clip, she explains that she's trying to find out, "Was it really that great moment from that interview? Is there any reason for people to still watch that interview?" After watching the first half of the story, she turns it off. The excerpted quote, she determines, makes up too much of the original story's material from the police officer. "That kind of sums up his interview, I think," she says. On chat, she asks the producer to cut the second half of the clip. She's pleased with what the producer has added to the story: A similar incident elsewhere, highlights of local and

[36] Melissa is a fictional name.

national media reaction. “It’s not the most transformative story I have read, but I think that I’m comfortable with the fact that if you look at each piece, I think she’s used them fairly,” she concludes. For her, the key principle governing excerpts is similar to what other aggregators have expressed: Does the user still have a reason to view the original story? Keeping the second half of the quote might have made for a fuller story, but in Melissa’s eyes, it would have made for a more derivative and ultimately unfair one.

Ethical Values: Adding Value

Melissa’s example points toward the third main ethical principle espoused by aggregators: The obligation to “add value” to the material one is aggregating, primarily for the audience. As Melissa considered the ethical appropriateness of the story, the value it added — in the form of media analysis and connecting it with a related event elsewhere — was a significant factor that kept it from being unduly reliant on the local TV news source. As several aggregators described it, adding value was a broader, overarching principle that the parts of the story constituted an ethical whole. As the editor of a social news site noted, one could attribute information assiduously and still end up producing a story that was ethically and professionally substandard:

> If your entire story is, you know, the first sentence is, ‘according to *The New York Times*,’ the second sentence, ‘according to CNN,’ third sentence, ‘according to MSNBC,’ then also, I mean, you’re citing correctly, but you’re not really adding anything. And so then you take a step back and you think, well, why I am writing a story? What am I kind of adding to the conversation? … When we’re not thinking critically about adding to the conversation, it’s easy to kind of recycle stuff, and recycling is not that far away from plagiarism.

Adding value is what separates aggregators from each other and distinguishes their work from the material they aggregate — what, as this aggregator argues, keeps them from merely recycling material and ultimately from plagiarizing it. It thus serves a tremendous

professional purpose beyond its ethical one in helping aggregators carve out a distinct realm of expertise.

Again, at VidNews, adding value — often phrased as being "transformative" because of its ties to the legal principle of fair use[37] — was also articulated as a primary ethical principle, perhaps the premier ethical principle. A story that was not transformative was considered unoriginal and bordering on plagiarism, and also robbed the original publisher of web traffic that was rightfully theirs. If the story was transformative, though, it might still gather some traffic that might otherwise have gone to the original story, but it would be a distinct story covering the same issue, rather than a piece simply replicating another story.

VidNews had shifted toward transformativity as a central ethical principle about a year or two prior to my visit there, and it was a crucial part of how its staff saw their evolution as a news organization. VidNews' senior editor explained the difference a focus on transforming news accounts and adding value to them made by showing me what used to be the company's most-viewed video of all time. Produced in 2012, it was about a baby that had accidentally been flushed down a toilet in China. As she played the video for me, she paused it every couple of seconds to point out details that indicated a lack of added value. As she described it, an introduction to a video clip that simply consisted of "[station] has the details" was a lack of context, and a picture of the incident shown as part of that local TV news clip was just a "backdoor way to show someone else's pictures." The piece quoted extensively from the Chinese newspaper *China Daily*, prompting her to say, "At that point, there's really no need to ever go to *China Daily*, because we already told you everything." At the conclusion of the video, she declared, "We would never do anything like that again. Ever." Why not? "One, there's no glory or honor in it. But two, it's not a legally viable business strategy." Transforming the news

[37] Transformative use of copyrighted content is a key defense for fair use, particularly as it relates to the purpose and character of the use, whereas more reproductive use is an argument against fair use (Isbell, 2010; Weaver, 2012).

story — by adding other sources of information, context, and the meso-level narrative analysis discussed in Chapter 7 that VidNews considers its trademark — resolved both of these problems. It largely satisfied the legal demands of the fair-use defense of copyrighted information use. And by establishing an ethical standard, it also reassured VidNews' journalists with the satisfaction — the "glory or honor" — that they were doing work that made them valued professionals improving the online news environment.

For VidNews, "adding value" or "being transformative" typically meant doing the type of meta-narrative analysis described in the previous chapter by referencing other media sources and juxtaposing their coverage of the story. Other aggregators described that added value as the context of background information and explanation, the addition of individual voice or opinion, or doing the work of reporting (i.e., making a phone call) to gather additional information from a primary source. In all of those forms, adding value functioned both as an ethical standard and as a way of articulating aggregation's professional value. Adding value was not only a crucial activity to keep aggregation from being parasitic and borderline plagiaristic, but it also functioned as a statement of aggregators' legitimacy as journalistic professionals. By adopting adding value as a central principle, aggregators asserted that they were functioned as professionals not simply because they avoided ethical taboos, but because with each story they added some journalistic value that made their work distinct and professionally useful.

"Clickbait" and Professional Identity

As I talked with aggregators about the ethical principles and professional values that they believed defined their work, one concept emerged as a significant marker of professional identity: Clickbait. Clickbait was a central term in aggregators' discussion of drawing traffic, enticing audiences, and defining newsworthiness. The word has emerged in recent years as a contested term within online journalism more broadly (Hamblin, 2014; Marchman, 2014; Smith, 2014), being used in a derogatory way to refer to content that appears to serve little informational or aesthetic purpose other than to draw web

traffic, or that oversells itself in a bid to draw that traffic. The term has developed particularly in relation to the recent scramble among many news sites to develop content that can go "viral" and be shared widely on social networks (especially Facebook), generating massive amounts of traffic and online conversation. Clickbait, in this context, is content that constitutes a naked attempt to go viral, playing on lowest-common-denominator attempts to titillate, pique curiosity, and jump aboard widely discussed news and entertainment topics.

As the aggregators in this study talked about it, clickbait boiled down to one basic practice: Overselling an article with little substance by putting it under a blaring headline which, in the words of one interviewee, "screams, 'Click on me!'" The practice has an antecedent in sensational tabloid headlines (Schaffer, 1995), but it has taken a more central place within contemporary online journalism. Though he did not use the term clickbait, Circa contributing editor Ted Trautman described this practice well:

> People oversell in the headline, and then the deck, and certainly the text of the article, kind of scale back the claim sort of implied in the headline. And so it's all about getting people to click. You know, 'Is Putin about to launch nuclear missiles,' question mark, and then the answer is no, he's not about to do that. But there's a truck that moved, or something much smaller.

But beyond the term clickbait, the practice of tailoring content to garner the maximum amount of socially generated web traffic permeated journalists' discussion of the newsworthiness of stories themselves. "Viral" stories were described almost as a distinct genre of news — news that was frivolous, offbeat, curiosity-arousing, likely to attract large audiences online, and ultimately devoid of substance. Both these fluffy "viral" stories and the tactics typically used to sell them to audiences were frequently disparaged: One aggregator referred to curiosity-piquing headlines and social media posts as "the black arts," and another described many of the pitches his editor gave him as "shitty clickbait kind of news." One SportsPop writer described writing overheated,

disingenuous opinion articles[38] as "trolling for attention or clicks," referring to the longtime online practice of making antagonistic statements one doesn't believe in order to anger other users.

Several aggregators argued that such disingenuous and pandering tactics in search of social traffic would ultimately be ineffective in the long run, as users would eventually avoid sites where the content failed to live up to the promise of the headline. "I think the carnival barker style works pretty well until people get sick of it — until they realize that, like, you know that Upworthy headline's never going to be as awesome what they're selling it as," said Stacy Cowley, staff editor for *The New York Times*' NYT Now app. Still, even for the aggregators who disparaged clickbaiting as a practice, it represented a real temptation. Cowley also described the guilty enjoyment she got out of giving one of her NYT Now summaries a clickbait-style headline and seeing it shoot to the top of the app's most-clicked list:

> I mean, all of us, we have that little part of our brains that's — we want to gamify our jobs. It's like, 'Yes! Look! I can make the clicks go up! Yay!' But then you have to balance that. I would not want to read a full feed of 30 updates that were all written that way.

Clickbait, then, was a particularly potent term of professional demarcation for aggregators because it represented a practice that hit especially close to home for them. Since their work was built around repackaging information provided by other news organizations, it was only a small step to make that repackaging consist essentially of pulling out a detail sure to grab people's attention and dressing it up with a come-hither headline. Clickbait served as a useful way to define boundaries between aggregation work on either side of that step, placing oneself on the professional side and distancing oneself from others widely seen as unprofessional.

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[38] The term "hot take" has also arisen recently to describe such articles, particularly ones with a moralistic bent (Reeve, 2015). SportsPop writers unironically referred to their opinion pieces as "takes," but reserved "hot take" as a mocking term for especially ill-considered opinions.

But as one might expect from a term used to make normative and professional distinctions between responsible and irresponsible aggregators, clickbait is a heavily contested concept among aggregators. Several of the informants I talked with had been accused of clickbait or of pandering to audiences on social network sites with their choice of topics; for SportsPop in particular, this was a common denunciation. They countered with several arguments: First, that the attempt to package one's story as attractively as possible to gain a broad audience is something all news organizations do online, not just those who are "clickbaiting." ("I think everyone's trying to write clickbait, right? Everyone's trying to get people to click on their stuff," said SportsPop's editor. "That's why everybody's here — getting people to click.") Second, as one of SportsPop's co-founders argued, the accusations were simply a byproduct of "covering a lot of trending topics at a very high volume." These were the topics that people would talk about regardless of whether the organization covered them, the argument went, so it only made sense to be part of those online conversations rather than letting them go by without you. Finally, several SportsPop staffers responded by asserting the authenticity of their intentions, proclaiming that they don't write anything they don't believe. The perpetually amazed tone of their headlines ("Watch LeBron James embarrass a defender with this ridiculous move"), they argued, only grates on some other online journalists because its earnest love of sports doesn't jibe with the sarcasm that tends to rule online media.

For many aggregators, the term "clickbait" and its attendant isolation and derogation of its practitioners functions just as boundary work classically has: As a way to reinforce their own professional status and to protect their cultural authority to act as a credible provider of news by marking other adjacent newsworkers as irresponsible and themselves by contrast as responsible (Gieryn, 1983; Winch, 1997). For those who would be read out of responsible, "professional" aggregation by such a use of the term, however, "clickbait" is more fraught, weighted with the normative prejudices of the cultural authorities within journalism, but also representative of manipulative practices

with which they do not want to be associated. Even as they expressed ambivalence about the term, the aggregators accused of clickbait often still felt it retained some usefulness in describing the practices of others whom they described as deviant — just not themselves. To them, despite their derision of the term, clickbait was valuable in stretching the boundaries of professional journalism just far enough to include themselves while still allowing themselves to draw lines between themselves and some of their competitors.

Clickbait's role in professional identity is also far more complex and multivalent than the ethical principles described earlier in this section. No one I spoke with wanted to forgo attribution, or make use of extensive excerpts, or add no value to the work they were aggregating. But virtually all of them wanted to package their news in a way that appealed to and broadened their desired audience — which is, of course, the same end at which clickbait is aimed. Understanding and reaching audiences is arguably a more valuable skill now than at any time in professional journalism's history (Benton, 2014; Usher, 2014), and it is also the core skill of creating clickbait. This makes clickbait a practice that is nearly as beguiling as it is loathsome to many professional journalists and aggregators. In turn, it makes clickbait a particularly troublesome professional boundary marker for aggregation and an apt emblem of the liminality with which aggregation relates to the rest of professional journalism, a subject we turn to next.

AGGREGATION'S RELATIONSHIP TO PROFESSIONAL JOURNALISM

Aggregators' relationship to professional journalism is indelibly marked by their marginal professional status. Many aggregators practice a form of work traditionally disparaged by journalists but enjoy a knowledge of online audiences that is the envy of their more traditional peers. Many of them work in legacy news organizations or have backgrounds in those organizations, but they occupy a marginalized place within those organizations' structure. As a result, they tend to view their work and status as inferior to that of other journalists, but are not necessarily resigned to that perception of their work; many of them are acutely aware of their image within the profession and have a deep

desire to be seen as legitimate. One of the keys to that legitimacy, as they see it, is expanding their work into reporting and longform journalism, indicating the degree to which in their perception, reporting is tied up with professional status.

Aggregators' Professional Backgrounds

As noted above, many news aggregators are young — in their twenties, and working in one of their first few jobs after college. This is not to say they lack a pedigree, by traditional standards: Many of the young aggregators I talked with had attended top-level schools — either elite private colleges or one of the nation's top journalism programs.[39] Nearly all of them had worked in professional journalism before their current jobs — a few had done online journalism in prominent traditional news organizations such as CNN or ABC News, but more had come from either local news organizations or non-traditional news organizations such as trade publications, arts and culture publications, or online publishers such as Yahoo or BuzzFeed. A few (especially in sports news) had come to aggregation from blogging rather than professional journalism. Much of the news industry has shied away from blogging as a reference point for the aggregation work they do, partly because of journalists' history of disdain for the practice. (SportsPop had consciously chosen not to label itself a blog, in part because it was more difficult to sell advertising space on a "blog" than on a social news site). But Craig Calcaterra, who runs NBC Sports' aggregative baseball site Hardball Talk, still viewed his work as blogging:

> I still approach it in the same way that the quintessential 2004 blogger would approach it. I wake up in the morning, and I think of providing a stream of things all day, literally logging what I'm reading on the web — you know, the root of the word 'blog,' web log.

[39] Many of these journalists, it should be noted, worked at national news organizations, either traditional or exclusively online, so they tended to occupy some of the more coveted news aggregation jobs in the field.

Two other SportsPop writers who came from blogging backgrounds saw their work as a similar continuation from blogging, but their approach was very much an exception among the aggregators in this study; the majority perceived themselves much more against the background of professional journalism than of blogging.

Despite his association of his own work as blogging, Calcaterra did not see it as dissimilar from the work of professional journalists, stating that "if you took the word 'blog' out of it and just described the basic functions, I don't do that much different than what a lot of traditional reporters do who are now working for newspapers that are primarily living online." Calcaterra articulated a significant point: The work and values of aggregation, in their amalgamation between relying on evidence to verify factual news accounts and using hyperlinks and analysis to annotate the published work of others, draw heavily from both professional journalism *and* blogging. This allows aggregators great freedom to map the values and practices of their work onto their own background and frame of reference, regardless of what it is. For most of the aggregators in this study, that frame of reference was professional journalism, though they also maintained some orientation toward web culture. (Said one SportsPop writer in a discussion on ethics: "We talk about good Internet manners here a lot.") But drawing on these widely disparate professional and cultural frameworks for understanding very similar activities can result in some awkward juxtapositions. One SportsPop writer with a background in blogging described "nodding along when people talk about the standards of journalism that I don't really understand, and then going and Googling them and trying to figure out what they're talking about." This writer's colleagues were doing the same aggregation work as he was, but because of their divergent backgrounds, they were using an entirely different set of professional principles to understand it.

Aggregators' Relationships with Traditional Newsrooms

SportsPop was the only one of the three field sites I observed in which aggregators were part of a legacy news organization, and it appeared remarkably well

integrated into the structure and culture of the larger newsroom there. The desks of SportsPop's staffers were near of the center of its sprawling, wide-open, window-lined newsroom, just a few feet from the managing editor's preferred perch. SportsPop writers and nearby staffers would occasionally lob half-yelled observations and jokes at one another, and the managing editor would frequently dart over to plan with SportsPop's editor. Many of the news organization's traditional reporters contributed brief pieces to the site, pitching humorous anecdotes they encountered during their daily reporting work to SportsPop's editor. The writers asked reporters for clarification on pieces they were writing, and in one case a SportsPop writer and an NFL reporter shared a byline on a SportsPop article that had combined their aggregation and reporting work. SportsPop's writers produced occasional reported pieces that appeared in the parent organization's main product, though they seemed relatively nonchalant about that exposure. Editors overseeing SportsPop within the organization spoke of the importance of tightly integrating the site into the rest of the operation, and that integration appeared to play out quite effectively in practice. A few interviewees in other organizations spoke of similarly close integration between aggregation units and the rest of the newsroom, with aggregators providing spot reporting help to desks around the newsroom in one case.

The parent news organization serves as a key source of legitimacy for aggregators in these relationships. The attachment to a respected legacy news organization is an important source of job satisfaction and professional pride for aggregators, just as it is for reporters there. An aggregator at a major sports news organization cited this organizational affiliation when asked about his daily motivation in his (fairly monotonous) work:

> I think being at [this news organization], just, like, being able to work at that [organization] in general. Knowing that even if it's a slow news day, you're responsible for something that's on the homepage, or you're responsible for something that maybe somebody cited in a [organization's primary news product]

> piece. I know that drives a lot of people, and I can speak for myself and say that it does for me.

With that organizational legitimacy also comes greater institutional weight for aggregators' own work as well. Several SportsPop writers referred to the reputation and standards of their parent organization when providing a rationalization for their own professional and ethical standards. Working for that organization that elevated not only their perception of their work, but the standards to which they felt it necessary to practice that work, lest they bring censure to the organization rather than simply themselves.

But while the organization provides legitimacy to aggregators in traditional newsrooms, it can sometimes be difficult for those aggregators to accrue professional legitimacy within those newsrooms themselves. Aggregators tend to be entry-level employees, and their work is often seen by their colleagues as lower-skilled, less substantial, and less time- and labor-intensive than shoe-leather reporting or traditional editing. This can make gaining legitimacy an ongoing struggle, because even good aggregation work is not highly valued within the larger organization. One journalist who does both aggregation and reporting at a national news organization contrasted the newsroom's attitudes toward the two:

> You're going to get kudos for a really well-reported, smart, and well-read story. For a story that does really, really well that you just aggregated, the most you'll maybe get, if it's really getting a lot of attention, is like, 'Ha ha, hey, that story is doing really well.'

The editor of a sports news aggregation team at a national news organization articulated an attitude toward aggregators in the newsroom that seemed to match the relationship I saw elsewhere, comparing aggregators to baseball's minor league system for young, developing players,

> the idea being that it's a way for us to get a lot of really talented young people in here and that the best of them are going to either move into more leadership

> positions within it or roll off into other positions on the site. … I think people have a lot of respect for some of the best people and realize that they're already helping the site tremendously. At the same time, if you think you're the Yankees, maybe you don't have quite the same respect for your minor league team.

In this way, aggregators were viewed within the newsroom as a talented pool of potentially valuable journalists for the news organization, but as just that — potential. Aggregators were valued members of traditional newsrooms but liminal ones nonetheless.

At times, however, the lack of legitimacy within the newsroom may be a problem more deeply rooted in aggregators' self-perception than anywhere else. Two managers of aggregation units within traditional newsrooms said they believed other journalists largely regarded the aggregators as full, professional members of the newsroom, but that their greater challenge was getting aggregators to see *themselves* as a fully legitimate part of the newsroom. This challenge speaks to the depth of inferiority that runs through aggregators' professional identity. They have so thoroughly internalized a professionalized hierarchy of the value of newswork — reporting at the top, with aggregation somewhere far below — that they become in some cases more wed to the sense that their work is inferior to that of reporters than the reporters themselves are. Given this sense, both aggregators and their non-aggregating colleagues considered doing reporting work as the surest route to improved standing within the newsroom, even more so than doing aggregation well.

Professional Journalism's Perception of Aggregation

Aggregators are quite aware of the perception of their work within professional journalism — that they are shallow, derivative, and generally unconcerned with the rest of journalism's ethical standards. They push back against these perceptions in a variety of ways, not least the articulation of ethical and professional standards surrounding attribution, excerpting, adding value, and clickbait described earlier. Beyond these means

of asserting their professional rectitude and isolating those they consider bad actors, aggregators also argue that their work is not as distant from that of traditional reporting as they might think. As I outlined in Chapter 2, this has been a significant argument in the public discourse defending aggregation, and the aggregators in this study made similar points. They pointed out that aggregation is becoming a more central part of journalism and that much professionally validated journalistic work has long resembled aggregation. "I think people talk about aggregating like it's this new thing," said one SportsPop writer. "People have been reporting on people's reports also since the beginning of journalism time." Likewise, Circa's Anthony De Rosa argued that the amount of aggregative work that takes place under the guise of reporting is understated. These arguments — and I have made similar ones throughout this study — are an effective way for aggregators to reduce the professional distance between their own work and the journalists with whom they seek to align themselves.

The opinions of the rest of the journalistic field meant a lot to many of the aggregators I interviewed; praise from the industry can be a great source of professional pride, and criticism can be cause for significant introspection. The developer of a news aggregation app said his most satisfying moment in producing the app was seeing it profiled at the Nieman Journalism Lab, a website devoted to innovation in journalism, because of the respect and attention from the industry that the feature connoted. Conversely, one aggregator said her site's shift toward more clearly identifying its sources and differentiating its content stemmed in large part from journalistic criticism of aggregation in public discourse during the late 2000s and early 2010s:

> Part of it was sort of a crisis of conscience. Part of it was the argument that was going on at the time: 'What the hell are you guys doing? You're just stealing our content. What is your purpose?' So we got a few of those grenades lobbed at us — you know, and other sites, obviously, as well — and you start to think, like,

well, there's something to that. Like, maybe it's not enough just to parse through the news.

More recently, an editor at a social news site said that a publicly reported case of plagiarism had prompted an overhaul of its practices, shifting them toward more rigorous editing and verification procedures and more original additions to their aggregated information. It may be tempting to view aggregators as defiant of or blissfully oblivious to professional journalism's disapproval of their work — and they were certainly portrayed that way during the height of the public arguments about the value of aggregation around 2008-2011. But with only a few exceptions,[40] this simply was not the case. Aggregators cared deeply about what others in the news industry thought of their work, and in several cases had responded to substantial criticism with substantial reform of their practices.

So how would aggregators like to be perceived within the news industry? Overwhelmingly, they want to be seen as innovators — this is how many of them view themselves, and what they see as their greatest contribution to the journalistic field as a whole. Aggregators throughout this study saw themselves as pushing the industry forward, whether in orienting news toward mobile users and experimenting with news story forms (in Circa's case), in developing creatively aggregated video news (in VidNews' case), or in deeply understanding audiences' news preferences (in SportsPop's case). Several aggregators proudly noted what they saw as other news organizations' attempts to imitate their forms of news as evidence of their innovative role within the industry.

But despite their self-perception as industry leaders in developing new ways of producing news, aggregators still see themselves as playing a secondary role within the

[40] Three of the aggregators interviewed, two of them SportsPop writers, told me they simply didn't care what others in the news industry thought of them, only that their bosses and audiences approved of their work. But even this nonchalance was complicated: One of the three (who told me, "I wish I could tell you that I cared" about her organization's professional perception) was the same one who told me the anecdote quoted earlier in this paragraph about her organization changing its practices in response to public criticism about stealing others' content.

profession in actually providing news to the public, befitting the second-order nature of their work. Two aggregators gave pictures of their work in relation to the field that are especially illustrative regarding this point. The first, explained by VidNews' news editor, puts aggregators' work on essentially equal footing to that of reporting:

> There are two types of journalism. There's one type where people go out and discover new things, they report new information. And there's a type of journalism in which people explain or package ideas in a new way that engages viewers or readers in a better way than they had been before. And you can do both very well, and you can do both quite poorly. So I'd like to think that we do the second. We present information in a way that hopefully reaches somebody who maybe hasn't quite understood it before, or hasn't seen it before at all, or maybe hasn't seen this perspective on a news story before, or maybe hasn't seen it in this visual a way before.

This is a remarkably perceptive characterization of the second-order journalism of aggregation: It is built around repackaging information that has been gathered by other journalists, but at its best it does so in a way that creates new understanding and reaches a broader audience than the original reported information.

The second was an analogy articulated by Circa deputy editor Evan Buxbaum, who borrowed the image from Matt Galligan, the company's CEO, that places aggregation in a more explicitly secondary light:

> *New York Times* reporting, that maybe is your entree. That's your steak dinner. But maybe what we are is the baby carrots. And we're really good for you, and you should eat us, because we're good for you. But we're not the main course. We understand that. But there's a value to us, and we will inform you,

Buxbaum and Galligan's analogy conceives of aggregation as more of an accessory to the "main course" of journalism, which is reported news. It begins with a fundamentally secondary relationship of aggregation to the core of the journalistic profession and

develops its justification from that point. Circa is only a side dish, they argue, but a healthy, helpful, and valuable side dish. Taken together, these characterizations capture the ambivalence with which aggregators view their relationship with professional journalism. At their best, they view themselves as an ideally complementary form to traditional reporting, pushing the industry forward into innovative presentation of information while clarifying complex issues for the public. But they also sense that there is something inferior in the secondary and contingent nature of their work, something that requires them to define their value only in terms of how they can supplement and aid the work of reporting, rather than creating professional value that they can claim as solely their own.

Reporting and Professional Prestige

Despite their ambivalence about their professional role, most aggregators expressed genuine satisfaction in their work. A variety of skills served as a source of professional pride and personal fulfillment: summarizing a story succinctly and engagingly (or, as one aggregator put it, "suck[ing] the marrow out of that story"); processing a flood of information and discovering interesting or important pieces of news within it; exercising cleverness and creativity in presenting the news; or making a story appeal to a large, interested audience. For many of these aggregators, aggregation was a practice they had worked hard to improve dramatically at, and being able to exercise those skills and see the value they held in producing proficient and engaging news was quite gratifying.

Yet they also tended to be self-deprecating about their work. Some participants expressed some discomfort discussing their work as a professional or cognitive exercise worth close scrutiny, hedging answers with statements like, "It's not like I'm doing high art here." Several talked candidly about the disdain most of the industry held for their work, occasionally revealing hints of their own distaste for it. "Nobody graduates from journalism school and wants to do aggregation," one breaking news reporter at a

traditional news organization declared. Some of this self-deprecation was rooted in their ambivalence regarding the ethical nature of their work ("I mean, to a certain extent, you're picking someone's pocket, right? ... Is it stealing? I don't know if it's stealing," said the breaking news reporter).

By and large, however, it was tied to the fact that they weren't doing traditional reporting — or not much of it, anyway. Several aggregators either said they didn't consider themselves journalists or expressed deep ambivalence about that title, and in each case the reason they didn't see their work as journalistic was because they weren't doing "shoe-leather" reporting. Their own work always seemed smaller in comparison to reporting work, as the editor of a social news site expressed: "You look at people who are reporting from the ground in Syria or are doing really in-depth stories about Detroit or something, and you think, 'Wow, that's real journalism.'"

This sense of inferiority and shame may not necessarily be rooted in the work of aggregation itself — since it overlaps significantly with reporting work, as Chapter 6 indicated — but the professional perception of that work. Still, some of it may have been tied to characteristics of aggregation work itself, and two factors in particular: The constraints of news judgment in relying so heavily on the published work of others, and the dominance of screenwork rather than the physical presence and kinetic nature of their romanticized ideals of reporting. Aggregators expressed longings to get out of the office and "on the ground" and to exercise the freedom of developing their own original story ideas and sources, and the absence of these practices in much of their daily work seemed to feed their sense of the inferiority of their work. In their reverence for reporting, these aggregators were reinforcing the sharp boundary between reporting and aggregation — elevation of the former and derogation of the latter — that professional journalists have used to edge them out of journalism's space. Not all aggregators believed such a clean boundary existed — recall several aggregators' statements earlier in this chapter about the similarities between aggregation and reporting — but most aggregators, even in

trying to articulate their own journalistic value, were doing it from a framework that began with reporting as the core journalistic practice.

This reverence for reporting as the wellspring of professional prestige was evident in the role that reporting played in the organization work and future plans of organizations that aggregated news. At both Circa and VidNews, editors talked excitedly about plans to ramp up extensive reporting efforts and longform journalism. Circa's Anthony De Rosa spoke of his plans to use money from the company's next round of venture capital funding[41] to expand the staff so that it could engage in longform investigative projects to run on its website. This seemed to me like a poor organizational and logistical fit with the kind of the extremely short, constant breaking news coverage Circa engaged in, but as De Rosa explained it, moving into investigative reporting was not about gathering information *per se* so much as it was a way to build cachet within the news industry, then use that halo effect to broaden its user base. VidNews' move into explanatory documentaries was a bit more appropriate for its current work, but ultimately built on the same purpose: "We're very efficient on day-to-day news; we're very efficient at producing daily videos and at delivering them to our partnerships. But we want to show people that we can do longer-term projects," said VidNews' news editor. For these organizations, it was not enough to do aggregation well in order to be considered professionally legitimate; they also felt they needed to do some sort of professionally recognized reporting.[42]

The same phenomenon was true at an individual level as well. Several of the aggregators who also did reporting work said they considered aggregation simply something they did in their day-to-day work in order to allow them to do the reporting

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[41] Circa was not able to secure this round of funding, leading it to close within a few months (Galligan, 2015).

[42] One of the web's most prominent aggregators, Upworthy, announced a similar shift toward more "original reporting" and away from aggregation later in 2015. Notably, the organization publicly released a report announcing the change, which received significant media coverage (Lichterman, 2015; Stelter, 2015) rather than simply making the change — an indicator that it was aimed as much at improving its flagging professional legitimacy as improving its content.

work they actually valued.[43] (Said one SportsPop writer, "It's about keeping the site going and making sure I still have a home for my longform stories to live on.") In fact, every one of the aggregators interviewed who did substantial "shoe-leather" reporting cited that reporting as the most satisfying part of their work, or as an example of their work they were proudest of.[44]

This perception of reporting as the truest form of journalistic work and aggregation as more of a placeholder influenced news managers' distribution of aggregation work as well. Among organizations (such as SportsPop) in which aggregation was part of a larger newsgathering operation, it was common for aggregation and reporting to be combined within the same job, with either workers doing both during the course of most workdays or with longer periods of aggregation work interspersed with "breaks" to do on-location reporting work. Editors and managers cited several reasons for organizing newswork this way — that reporting work improved journalists' aggregation skills, that their organizations needed the aggregators' assistance to augment their reporting resources. But the most prevalent reason was that allowing aggregators to do reporting work was an invaluable boost to their morale and job satisfaction, an important strategy for retaining workers and reinforcing their importance to the organization. SportsPop's editor insightfully described the perception of aggregation as a relatively unrewarding task and reporting as its more ambitious and professionally satisfying counterpart with a comparison of aggregation to baseball's sacrifice bunt — a play that epitomizes the use of a mundane, unambitious skill to advance the larger goals of the team.

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[43] This finding mirrors Usher's (2014) note that online journalists who worked primarily in a speed-based environment highly valued their longform work as a chance to take a break from their deadline-based daily work.

[44] Craig Calcaterra of NBC Sports' Hardball Talk, a longtime blogger, was a notable variation on this theme. For him, aggregation was something he did to "pay the bills" for his opinion writing on the site, which he considered the soul of his work. He said his opinion writing was what kept him motivated to do the job year after year: "If it was, 'All we want you to do is aggregate news stories,' or 'All we want you to do is to find funny videos and viral content, and sorry, we just don't have any time or space for you to write these more involved things that you like to write,' then yeah, that would probably be a deal breaker for me."

> I think for most of us, we're writing this quick-hitting stuff, and it's tough to feel rewarded because it's almost like we're bunting every time. I mean, really, that's what it is. It's like each of us is laying down a bunt one right behind the other, and we're just scoring runs by bunting the entire time. But every now and then, one of us gets to take a swing, and when it goes over [the fence], that's super rewarding.

For journalists at SportsPop and elsewhere, aggregating news is scoring runs by bunting; it is ultimately a successful strategy, but one that curtails ambition and forgoes the fundamental activity of journalism — reporting, or in this analogy, swinging the bat in an attempt to get a hit — to achieve those ends. Reporting, on the other hand, offers the opportunity to hit a home run, to create something that is actually meaningful and can establish one's own professional legitimacy and generate genuine satisfaction.

CONCLUSION

Aggregation is defined epistemologically by its subordinate relationship to reporting as a form of gathering evidence, and is defined professionally by its subordinate relationship to reporting as a means of establishing journalistic authority. This secondary relationship to reporting is the main source of aggregation's marginal status within professional journalism, and it colors aggregators' attitudes toward their own work as well. As much as aggregators seek to establish their own professional legitimacy, those efforts are ultimately responding to the perception of aggregation as an inferior form of information gathering. Therein lies a fundamental duality of aggregators' professional perception of their own work vis-à-vis reporting: Their articulation of ethical values and their arguments for the similarity of aggregation and reporting are born out of a desire to place their own work on the same professional footing as reporting, but their professional self-perception is deeply imbued with a sense of inferiority to reporting. This duality fuels both aggregators' satisfaction in their status as journalistic innovators as well as their simultaneous regard for reporting as the true passport to professional legitimacy and satisfaction.

This ambivalence regarding professional status was evident in a variety of ways: In aggregators' descriptions of their own value to the field, which cast themselves as supplementary to the primary work of reporting; in their ambitious plans to develop reported journalism, regardless of how well it fit into their operation; in their relationship to their larger news organizations as the newsroom's "minor leagues"; and in their acute awareness of and responses to how they were being perceived by other journalists. These are the attitudes and actions of a group of people who are within the penumbra of professional journalism but not fully recognized as a legitimate part of it, who have great reverence for the norms and practices of journalism but also realize that those norms and practices must be expanded and redefined to include their own work.

Despite this ambivalence — and even in part because of it — aggregators are indeed developing a distinct set of professional norms. The norms of attribution and excerpting are ones that track quite closely with traditional professional journalistic norms around attribution of information and avoiding plagiarism, but play a more central role in the work of aggregation. The norm of adding value is a more distinctive one to aggregation, as it arises specifically from the condition of building work on previously published news reports — something endemic to aggregation but heretofore relatively unacknowledged in professional journalism beyond the admonition to avoid plagiarism. Originality is the key element undergirding this ethical framework, a norm that takes on a uniquely prominent value in aggregation work. The use of clickbait as a boundary marker with which unprofessional aggregators can be excluded is a notable norm because it reflects an attempt to police the boundaries of attracting audience attention and identifying appropriately newsworthy topics. Both of those boundaries are important skills that journalists of all types have sought after, but through clickbait as a norm, aggregators have interpreted two of their own key skills as possibilities for severe professional violation if taken too far. More than any of the other norms, the articulation of the norm against clickbait represents an effort by aggregators to both tighten the net of

what is considered appropriately professional journalism so as to include their own work within it.

Aggregators' articulation of distinct professional norms while they emulate mainstream journalism's primary work of reporting also indicates the hybridity of their work and the values from which they draw. Most of aggregation's professional and cultural reference points come from the world of journalism, but their work is also deeply informed by the material and cultural conditions of producing information for the web. They have naturalized a news production pace that is significantly faster than that of their journalistic forebears, and their work is dominated by absorbing and evaluating a relentless, all-encompassing flow of information mediated through an ever-present screen. Their senses of when and how attribution and linking are appropriate and what lengths of excerpts are proper are driven not just by the values of professional journalism, but by deeply ingrained "good Internet manners," as one SportsPop writer put it, that have developed largely apart from professional journalism (Coddington, 2014c). At the same time these journalists spend their workdays immersed in the cultural space of the web, many of them are also planted in the physical space of the newsroom, heightening the tension between the two realms from which their norms and practices are drawn. These worlds continually intermingle and overlap, together pulling aggregators toward a professional identity that operates largely in the liminal space between the two. In this space, aggregators derive much from both and are always working to develop a firmer foundation on which to build lasting norms, practices, and standards.

Aggregators' professional liminality contributes to a broader ongoing erosion of professionalism within journalism. Journalism's professional status has been challenged in recent years by the ethic of participation that prevails in online information production and dissemination (Lewis, 2012), and by its increasing instability as a field as core institutions are weakened. Aggregation's liminal status furthers this professional enervation by pushing a large group of journalists toward the fringe of the profession at a

time when the practice at the profession's center, reporting, is weakening. This marginal status is not necessarily detrimental to the quality of content produced within the news ecosystem, since this liminality pushes aggregators to articulate and police more rigorous ethical and professional norms to gain acceptability, just as full members of the profession do. Aggregation's ties to professional journalism are important in giving aggregators an incentive to uphold the quality of their information. While their hybridity gives them some valuable leeway to articulate and enact norms that are distinct from the profession as a whole, more professionalized aggregation should lead to higher-quality information.

CONCLUSION

Chapter 9: Making Sense of Aggregation and Reporting

In this study, I sought to provide a comprehensive examination of aggregation as an emerging form of newswork, evaluating the ways in which it both derives and diverges from the forms and practices of modern journalism as a means of assembling and communicating knowledge. Aggregation is a crucial object of study within contemporary journalism because it is the means by which a growing amount of news and information is gathered and communicated to the public, a form of work that is becoming more central in both the public's news consumption and journalism practice. Specifically, this study had a threefold purpose: 1) to examine news aggregation's relationship to traditional reporting's epistemological practices and assumptions regarding the construction of evidence and facts; 2) to understand the role of narrative in aggregators' understanding and communication of the news; and 3) to explicate the relationship between the professional identity and values of news aggregation and those of traditional journalism. The epistemological perspective is a valuable one from which to view aggregation because it offers a window into the changing modes of gathering and evaluating evidence and construing it as factual narrative in a digital environment in which the number of objects of evidence has proliferated but the certainty of that evidence has been chipped away.

This chapter outlines the findings of this dissertation and assesses their significance for the broader realms of online journalism, news production, and democratic implications. It does so in four main parts: First, a summary of the major findings of this study and the picture they provide of news aggregation; second, an examination of where these findings fit within recent research on online news production and the epistemology of journalism; third, an assessment of this study's ramifications for the future development of journalism practices; and fourth, a reflection on the study's

strengths and weaknesses, followed by a conclusion reflecting on its broader democratic implications.

SUMMARY OF FINDINGS

This study was designed as an examination of news aggregation as both an epistemological and professional set of practices, with an exploration of the role of narrative form in establishing its epistemological characteristics and of the role of aggregators' professional identity in illuminating its relationship to traditional forms of journalism. In analyzing each of those aspects, several connections developed across them; this summary outlines the findings of those individual strains of analysis while also identifying the overarching themes that emerged between them. First, though it is not part of this study's empirical findings, the typology of aggregation developed in Chapter 2, which organizes forms of aggregation according to the degree to which they recreate content and the congruence of their news judgment, helps classify modes of both aggregation production and its orientation to audiences. For those interested in evaluating aggregation from a professional or industry-oriented perspective, the typology can help determine ways to organize labor, potential competitors, and market dynamics and maximization strategies by providing a novel way to map forms of aggregation. For scholars examining aggregation as a form of newswork, the typology can help clarify the nature of news judgment being exercised, the type of work being performed, and its adjacent modes of production and attendant cultural and technological factors relative to blogging, reporting, and online search.

In Chapter 6, I explained what it means for aggregation to function as a form of second-order newswork: In relying on other published news accounts, aggregation consists primarily of gathering "evidence of the evidence" supporting those accounts. This has meant building its epistemological structure on that reporting, seeking textual evidence of the forms of evidence gathered through reporting work — observation, interviews, and documents. In this sense, it functions as an amalgam between annotative

journalism, a fundamentally intertextual form that operates through critical analysis of published texts (Graves, 2015), and the evidence-seeking practices of reporting. Aggregation's additional degree of distance from these objects of evidence leads it to be marked by a nagging sense of skepticism and self-doubt. Journalists have long viewed reporting as marked by the same skepticism — as indicated by clichés such as "If your mother tells you she loves you, check it out" — but research on reporting has shown that much of it takes bureaucratically and officially produced information at face value (Fishman, 1980; Tuchman, 1978). Aggregators can be similarly credulous, but the secondary nature of their work makes doubts about the provenance of information more salient than for reporters. Aggregators mitigate these doubts by attempting to directly access primary sources and by using careful textual presentation to distance themselves from information about which they are unsure. One crucial means is through live-streamed news events and social media posts by newsmakers and official sources. This technologically enabled presence offers them more direct (though not completely direct) access to evidence, allowing them to bypass other reporting as an intermediary.

As I demonstrated in chapters 6 and 8, aggregation's relationship to reporting is complex and multifaceted. As a form of second-order newswork, aggregation is built on reporting — not only dependent on it for information, but also oriented around its realist means of assembling evidence into facts. Likewise, aggregators' professional identity is built on a self-perception of inferiority to the work of reporting and of playing a supplemental role to it within the journalistic field. On the other hand, aggregation and reporting work overlap in significant ways. Both practices consist of assembling and evaluating forms of evidence and presenting them in the form of factual evidence to audiences. The evidence reporters gather is not as direct as it is often characterized, and the evidence aggregators gather — thanks to technology and efforts to contact primary sources — is not as indirect as its caricatures might suggest. Many aggregators also do traditional "shoe-leather" reporting alongside their aggregation work, as well as a thin

form of confirmatory reporting consisting largely of brief phone calls to official sources in which aggregators place much epistemological faith. Despite these overlaps in their work, aggregators tend to view reporting as a key to professional prestige and personal satisfaction, reinforcing a professional hierarchy that puts reporting at the top and their own work much lower.

Narrative also plays an important role in aggregators' conception and construction of accounts as contributing to public knowledge on news events and issues, as I explained in Chapter 7. In this study, I developed a three-tiered conceptualization of news narrative at the macro (myth), meso (story arc), and micro (story form) levels, finding that aggregation shifts the primary level on which journalists conceive of narrative in their work from the micro to the meso level. Because their work is built on the published work of others, aggregators are drawn into considering their work as part of a broader narrative consisting of the arc of an ongoing story across numerous news accounts. In order to differentiate their work from that of their many competitors writing similar accounts, aggregators evaluate the trajectory of a news story along that broader arc and consider how it relates to other stories or what they can add to it at its current point on that path. Conversely, aggregators give considerably less attention to narrative at the micro level than other contemporary journalists, conceiving of narrative not as the more literary elements of storytelling, but as logical flow, context, and evidence of the work of reporting. Thus, the granular conception of news broken into "atomic units" of facts or events shifts news away from particular micro-level narrative concerns (notably, a focus on the article as an organizing narrative concept), but actually moves it deeper into narrative, as it prompts journalists to connect atomic units to each other in broader trans-article narrative constellations. The complaint exemplified by Neveu (2014) that aggregation has helped divorce journalism from storytelling is accurate in part, insofar as it conceives of storytelling as micro-level narrative conventions. But the role of narrative

extends far beyond that, and aggregation pushes journalism's emphasis further into those broader narrative realms.

Aggregators also exercise news judgment in different ways than modern journalists typically have, as I outlined in chapters 6 and 7. News judgment as aggregators employ it is both expanded and constrained: Its expansion is tied to the shift in narrative emphasis from the micro to meso level, as news judgment consists not simply of judgments about the newsworthiness and verifiability of an event or situation, but also an understanding of how a news story is developing through time and relating to other stories, and what attributes of it are most appropriately emphasized at that point in its development. But it is also deeply constrained by two factors: Aggregators' fundamental reliance on other news organizations for their content, which entails borrowing the news judgment originally attached to that content; and their orientation to gaining traffic by reflecting the trends of online social conversation. The result is a form of news judgment that stretches more broadly in the factors it considers when evaluating events as parts of stories, but is more tightly constricted in its autonomy to determine which events are news stories in the first place.

Finally, aggregators' professional identity and status, as I described in Chapter 8, is marked by its liminality. Because of its status as second-order newswork, the historically marginalized place of online news production within the journalistic field, and the relative youth and inexperience of its practitioners, aggregation occupies a location on the edges of the profession. Aggregators respond to this marginality with professional ambivalence. Some hesitate or decline to call themselves journalists; others consider themselves journalists but conceive of their aggregation work as inferior to the work of reporting; and still others argue for professional equality. Given this ambivalence, aggregators seek to highlight their own similarity to other professional journalists, by articulating a set of ethical norms and policing the boundary between their own work and the practice of producing "clickbait." But they also emphasize their

differences from the rest of the field, by conceiving of themselves as innovators and valuing distinct skills such as the processing of unrelenting flows of digital information. The ethical norm of adding value in aggregation is an important one in this respect, as it reinforces both aggregators' similarity to the rest of the journalistic field (by emphasizing their importance to the field and pushing them toward reporting work), and their differences from it (by consciously seeking to differentiate aggregators' work and output from that of the news sources on which they rely). Aggregators thus continue to seek legitimacy from the journalistic profession while also acknowledging the dependent and liminal nature of their work.

CONTRIBUTION TO JOURNALISM RESEARCH

This study reinforces and supplements the recent research into the nature and conditions of online news production; in aggregation it finds many of the characteristics found in online newswork by other scholars. It is characterized by a continual urgency, naturalized as an ordinary working speed (Boczkowski, 2010; Boyer, 2013; Usher, 2014), the absorption and organization of a flood of continually updated digital information (Boyer, 2013), and the professional uncertainty and ambivalence of a practice that derives both from professional journalism and adjacent web-based forms of information production (Agarwal & Barthel, 2015; Hartley, 2013; Vobič & Milojević, 2014). In particular, it highlights the role of reporting as a professionally valorized form of work that functions to organize professional perception (and self-perception) and legitimacy within the field. In this respect, this study contributes to the rapidly growing body of research on online journalism as an emerging professional practice by examining its characteristics in relation to a particular form of online journalism — aggregation — and exploring the distinct ways in which those characteristics take shape within the context of that form of work.

Beyond this understanding of online journalistic work, this study makes its most significant contribution in revealing online journalism's epistemological dimensions.

While there is much research on the changing nature of journalistic professionalism (Lewis, 2012), there is considerably less work examining the changes in journalistic epistemology as it is put into practice in online contexts. By focusing on the epistemological distinctions of news aggregation especially as it relates to more traditional forms of reporting work and news narrative, this study bolsters a less-studied but crucial area of inquiry into the changing nature of the knowledge that online news presents to its audiences and the means by which it accesses and constructs evidence to produce that knowledge.

Specifically, this study finds that journalism is becoming more uncertain and diffuse with the proliferation of forms of evidence and means of gathering and organizing it. During journalism's high modern era (Hallin, 1992b), its epistemological basis was relatively unchallenged. Reporting was its primary means of gathering information, and though it was an incomplete and ideologically rooted evidence-gathering technique, it was supported by the prevailing epistemological ethos of the time, which was a realism that held that reporting could faithfully represent the reality of an event or situation (Ekström, 2002; Ericson et al., 1987; Godler & Reich, 2013b). Reporting's epistemological authority was also buttressed by the relative paucity of alternative means of gathering and presenting information, and by the inability for the public to scrutinize its methods or access and disseminate the same evidence itself.

Today, the professional veneration for reporting remains strong, but in practice, it has receded to only one of many forms of gathering evidence on news events. Reporting remains based predominantly on a realist model, but the public's belief in that model — namely, the notion that reporting can give a definitive account of reality — has waned, and with it, their acceptance of journalism's knowledge claims based on reporting. As the barriers to information dissemination break down online, other ways of gathering information beyond professionally validated forms of reporting have multiplied, and the methods and standards through which evidence is assembled into knowledge about news

events and issues have become diffuse. Aggregation is perhaps the most prominent of these emergent forms of information-gathering, and it too is confronted with the epistemological uncertainty of being removed from reporting as a means of validating information. Aggregators' epistemological framework remains largely built on a realist conception of factual information manifested in the practice of reporting, on which it relies heavily to verify the knowledge it presents. Still, aggregators adjust to reporting's decline in practice and in epistemological authority by finding ways to mitigate their own inherent uncertainty, either by publicly communicating that uncertainty as they present information or by using other textual or technological means to solidify the veracity of that information. Even these measures, however, do not necessarily establish their information as valid to the public; the epistemological certainty and authority afforded by reporting in the high modern era is not returning within a post-realist age.

AGGREGATION AND THE FUTURE OF NEWS

American journalism appears to be on the downslope of what I refer to as the *reporting parenthesis*, a period beginning roughly in the 1880s during which reporting served as the primary journalistic method of gathering information.[45] This reporting — based on interviewing sources, observing news events through physical presence, and accessing officially produced documents — was the core form of journalistic activity during this era, which has thus far coincided with the development and dominance of a professionalized form of journalism. But reporting has not always been the preeminent form of newsgathering in American journalism; before the 1880s and 1890s, most of the news in American publications was gathered through gossip and hearsay, correspondence from travelers elsewhere, and aggregation from other published sources (Barnhurst & Nerone, 2001; Schudson, 1978, 2011; Starr, 2004).[46] Nor is it destined to continue

[45] As Krause (2011) notes, the height of journalism's orientation around journalism was roughly from 1945 through the 1970s, roughly corresponding with Hallin's (1992b) high modern period. The parenthesis extends beyond this period in both directions, but it reached its peak during this postwar era.

[46] Schudson (1978) has written the definitive account of the rise of reporting as the dominant form of American newsgathering.

indefinitely as the core method in which news is gathered and on which journalistic accounts are based. Instead, as I argued in Chapter 2, the amount of reporting being done by professional journalists is demonstrably declining as the proportion of aggregation work rises, and as the news consumed by the public is increasingly made up of aggregated accounts (Anderson, 2013a; Boyer, 2013; Lewis, Williams, & Franklin, 2008; Phillips, 2012). The mode of journalism that primarily consisted of reporting should thus be thought of not as its default, but as a parenthesis — an interlude approaching approximately 130 years amid the overall dominance of news as a form primarily gathered and communicated secondhand.

But the aggregative news that is emerging at near the close of the reporting parenthesis is quite different from the form of news that preceded that era. Most significantly, the professionalized journalism that was ushered in alongside the development of reporting remains very much intact, so that aggregation borrows much from modern journalism's mindset even as it diverges from its methods of newsgathering. Just as modern journalism has been, news aggregation as it is currently practiced is predominantly realist, driven by professional expertise and editorial structure, and devoid of public participation or even substantial interaction. Aggregators (as well as journalists as a whole) have developed a heavier focus on their audiences' desires and more advanced ways of measuring them. But aggregation remains essentially a sophisticated gloss on the same basic role that modern journalism has always assigned to its audience — as passive consumers whose greatest contribution to the news process is to share content with friends. Aggregators still place much faith in their own professional ability to determine what news is and how it should be presented.

Still, their means of gathering news bears significant differences from that of reporting, and we must begin to discern what journalism looks like as a form of knowledge production when reporting is no longer its dominant method. In terms of its presentation of knowledge through narrative, the concept of the atomic unit — however

nascent and amorphous at this point — has the potential to rethink the inverted pyramid-based article as the primary vehicle for the communication of journalistic knowledge and to recombine the informational elements in novel ways. As the case of Circa illustrated, orientation around an atomic unit may result in a narrative form that is relatively similar to the classic inverted pyramid, but one that nonetheless presents new opportunities to deliver news to audiences (in this case, ongoing updates to mobile users) and to reconsider the broader arc of and relationship between news stories. Far from obviating the crucial role of narrative in news, the notion of the atomic unit offers an opening to think critically and creatively about how to broaden and reorganize forms of news narrative as the means of its production and delivery also change.[47]

A shift toward aggregation in production of news knowledge may carry other benefits: With its increased orientation toward broader meso-level narrative and commitment to adding value, aggregation can offer greater flexibility to explain news and set it within the context of broader issues. With its ability to isolate key elements of complex stories and present them in creative forms, aggregation can expand their reach into a variety of publics in distinctly engaging ways. But there are crucial drawbacks to an aggregation-heavy news environment as well. As I noted particularly in Chapter 6, aggregation is a fundamentally secondary form of newsgathering; it requires news to aggregate, and much of that news must be gathered through some form of reporting. Therefore, aggregation functions best as a complement to reporting, working alongside it to explain events, tie them to broader social issues, and bring them to wider public attention. An information environment with aggregation as the dominant form would be untenable.

[47] It should be noted, however, that advocates of the atomic unit can fall into the trap of treating that atomic unit — whether a fact, an event, or a piece of data — as a given, as opposed to a construction just as stories themselves are constructions. It is important to remember that even the smallest, most elemental units of news are not ontologically pure pieces of reality, but are subject to social and professional forces just as the rest of news is.

But aggregation is not hurting reporting. Even though aggregation's emergence has been inversely related to reporting's decline over the past decade, the two are not zero-sum. Aggregation is meant to clarify and amplify reporting, to improve it and extend it, rather than compete with it. The question of whether aggregation helps or harms the market for reporting is an empirical and economic one that this study is not equipped to answer, though several economists have shown that if aggregators are prominently linking to sources and giving audiences reason to click through to them, organizations providing reported news benefit economically from the larger overall pool of news attention that aggregators help provide (Chiou & Tucker, 2011; Dellarocas et al., 2010; Lee & Chyi, 2015). Ultimately, the relationship between aggregation and reporting is neither a parasitic one nor a truly symbiotic one; it is an asymmetrical one in which aggregation benefits from and depends on reporting, but does not *by necessity* help or harm reporting by doing so.[48] It can harm reporting if it does not adhere to the professional standards of prominently linking to sources and adding something substantial original work without merely reproducing it or stripping it bare, but it can help reporting as well. It is quite clear that improvements in reported news aid aggregation, giving it a greater range of more compelling and valuable news to cover. What is also true, though not quite as intuitive, is the reverse: Improvements in aggregation aid reported news, increasing the number of people who are exposed to the important information it provides and augmenting both the public understanding for which it aims and the potential for democratic impact through that public understanding and engagement. It is far more likely that aggregation and reporting will thrive or wither together than that one will thrive at the other's expense.

For both reporting and aggregation to flourish, then, professional journalism must move beyond its single-minded veneration of reporting as the "single source of virtue"

[48] Aggregation's relationship with reporting in this way resembles a commensal one, in which one organism is benefited and the other is unaffected. But it differs from commensalism in that reporting is not unaffected; it is simply not definitively or necessarily affected either positively or negatively.

(Rosen, 2015) in newswork, as its sole legitimate or even most legitimate form of newsgathering. Reporting has been wed to professional journalism for long enough to make it easy to believe that their marriage is inevitable, but it is not. Reporting must remain a vital part of journalism's information-gathering repertoire, but many other ways to get reliable, useful information about news events to the public are also emerging.[49]

To be its most effective and useful to the profession and the public, aggregation must be valued as a full professional activity, rather than only a marginal one. Not all aggregation requires complex tasks and profound expertise; some of it is simple, mundane, hamster-wheel work (Starkman, 2010), just as some reporting is. But the most useful and effective aggregation requires a broad suite of high-level skills: Mental agility, creativity, broad knowledge, quick thinking, superior "crap detection," and clear and clever writing. The journalistic profession (along with journalism educators) should teach and train these skills and their application to aggregating information as assiduously as it does reporting. And it should value and reward the best aggregation as richly as it does the best reporting, giving young news aggregators a professional path forward through aggregation, rather than reinforcing to them that it is simply the placeholder content they create to get to their "real work" of reporting. In doing so, journalists and news organizations can attract, retain, and nurture more talent within news aggregation, encouraging the development of forms of aggregation that are more substantial and thoughtful than its hamster-wheel incarnation. At the same time, the journalistic conception of reporting should expand beyond its "shoe-leather" mythology to include practices that deal more with information-gathering by non-professionals and use of published news sources, such as crowdsourced "pro-am" reporting efforts, data journalism, and reporting-aggregation hybrids. The more similar aggregation and reporting become, the better off newsgathering as a whole will be — not because one of

[49] E.g., computational and algorithmic forms of accountability journalism (Diakopoulos, 2015), the use of crowdsourced and citizen-driven information that relies on distributed expertise and knowledge (Aitamurto, 2015), and forms of research into news events such as those practiced by the history-oriented news app Timeline, which employ a journalistic approach to academic-style research.

those forms apes the other, but because both gain more flexibility and potency as information-gathering methods.

STRENGTHS, WEAKNESSES, AND OPPORTUNITIES FOR FUTURE RESEARCH

The primary strengths of this study lie in its breadth along two dimensions: First, it examines a variety of aspects of aggregation as a form of newswork, from the means by which information is gathered and verified, to the way it incorporates narrative elements, to its ethical norms, to aggregators' professional identity. This breadth provides a comprehensive account of aggregation in practice in American journalism, exploring not only its process, but also the form in which it is presented and the manifestations of social and professional influences on it. The resulting analysis covers the sociology of this form of news production from a perspective that encompasses its epistemological practices, narrative forms, professional orientation, and occupational conditions.

Second, its methodological flexibility provides it with the breadth necessary to capture the exceptional range in aggregation forms and practices. The combination of participant observation and interviews allows the study to examine aggregation practices in action as well as the cognitive processes underlying those practices, using both to fuel a holistic understanding of the epistemology of aggregation alongside its professional and cultural aspects. In addition, the fieldwork at multiple sites with widely varying characteristics, especially when employed in conjunction with interviews with aggregators from 17 different news organizations, gives a vivid picture of a broad range of aggregation practices and contexts. This helps guard against undue generalization and instead enables the study to present a richer, more nuanced picture of aggregation informed by a wide array of data and perspectives. The result of this breadth is a study that can address aggregation throughout the process of its production and across its myriad forms and organizational and professional contexts.

In addition, this study is theoretically grounded in the rich literature on the role of epistemology and narrative in journalism, which enables two primary advantages: First, it

allows the study to make clear, careful, and meaningful distinctions between aggregation and reporting, comparing the two as the primary modes of information-gathering in contemporary journalism but also highlighting the similarities in their practice. Second, it extends the study beyond the simple examination of aggregation as subject in itself, allowing aggregation to function as a window into shifts in the way contemporary journalism produces knowledge and employs narrative in a tumultuous digital environment. This theoretical and conceptual depth is intended to give the study a more long-standing contribution than simply a descriptive study of the latest trend in online news — a form of research that is all too common in this area of scholarship. My aim has been, as Benson (2014) prescribes for studies of new developments in communication, to use this theoretical grounding to not merely describe how aggregation works, but to begin to explain how it came to work that way alongside that description.

This study also has some limitations that should be considered when assessing its conclusions and implications. One limitation stems from the immensely broad nature of aggregation as a practice and a form of presenting information. Even with the deliberately narrowed definition of aggregation in Chapter 2 and the focus on news-related forms, this study's conception of news aggregation still covers everything from the automated search-based format of Google News to the mobile daily news summary of Yahoo News Digest to the rewriting of breaking news updates at any number of breaking-news aggregation outlets. I have tried to bring some conceptual clarity to those forms through the description and typology in Chapter 2 and some range to the data gathered about those forms through my broad methodological approach. Still, some gaps are inevitable with a phenomenon this varied. In particular, this study is light on analysis of automated forms of aggregation because of my decision to focus primarily on aggregation as a form of newswork. Only two interviews were conducted with aggregators who worked on primarily automated products, so I am not able to conduct any substantial analysis on automated aggregation based on that data. More generally, the range of aggregation

practices makes generalization difficult; for this reason, I have tried to avoid excessively generalized statements, clearly describe the range of attitudes and practices I encountered, and note exceptions where they appear to be significant.

A second limitation was my relatively brief time in the field doing observation of news aggregation at work. Spending a week each at three different aggregation operations was sufficient to give me a stable impression of those forms of aggregation in practice, but it was not enough to yield the kind of deep understanding that comes from being embedded within the culture of a field site. I was not able to perceive changes over time at these sites, nor was I able to witness enough persistence of patterns to identify and explore exceptions to those patterns. The observation I did at those field sites should not be confused with the kind of deeply immersed cultural perception that is ethnography's signature characteristic. Still, the observation did allow me to witness and interrogate aggregation processes in practice, providing some valuable empirical grounding for the study's data, and interviews also helped supplement the limitations of this data. Even with these assets, the lack of extended time in the field limited my ability to examine the development of aggregation over time and to provide a richer, more culturally grounded description.

The limitations of this study point, however, toward the opportunities to build on it through future research. Other ethnographic studies of digital news production have offered rich descriptions of some elements of aggregation and illuminated their role in relation to their larger object of study — the practices of online journalism (Anderson, 2013a; Boyer, 2013). Future research could build on both this scholarship and my own, using extended ethnographic research of aggregation organizations to offer greater cultural description and longitudinal perspective. Additionally, there is much yet to learn about the values and practices behind automated forms of news and content aggregation. Ananny and Crawford (2015) have offered some valuable initial insight into this area through their study of "interstitial designers" of news apps, but there is more work to be

done connecting their work with the professional practices and epistemology of aggregation.

Beyond these extensions, there is much potential work to be done examining aggregated news from the audience's perspective. We know little about how aggregated news fits into users' media repertoires, what credibility they ascribe to it, and what effects it might have on their knowledge and perception of current events. Given the volume of research that has been done on these sorts of questions regarding so many other forms of online and traditional news, the sparseness of the scholarship on these questions as they relate to aggregation is striking.

Researchers could examine public perspectives on aggregation with a variety of topical, theoretical, and methodological approaches, but it may be fruitful to pay special attention to the role of aggregated news consumption within the mobile environment. Several aggregators in this study noted the ascendance of mobile news consumption as a primary influence on their thinking about aggregation, but researchers have done relatively little work on how news is actually consumed and perceived on mobile devices, much less aggregated news specifically. This work could also extend to the role of mobile technology and mobile news consumption in journalists' and aggregators' conception and production of news, especially as journalists inscribe technological attributes and uses into their design of news for those technologies (Boczkowski, 2004). All of this work could yield a fuller understanding of aggregation not only as a mode of news production, but also as a form of information that has a significant role to play in the public spaces in which news is consumed, discussed, and shared.

Finally, the prominent role that Circa played in this study deserves some additional reflection, given that the app no longer existed by the time the project was completed. Circa shut down after this dissertation was written but before it was defended, prompting many within the news and mobile technology industries to examine its demise as an object lesson in failed news innovation. Circa's brief existence and inelegant

shutdown may lead to questions about the ultimate viability and value of its practices and approach to news described in this dissertation: If Circa couldn't interest enough users or sustain enough of a workable financial model to survive for even three years, how valuable could it really be as an example of an ascendant form of newsgathering and presentation? Does its short life mark it as simply a failed experiment with little relevance for other aggregation initiatives?

I contend that its relevance and value as an illustrative case of news aggregation is not significantly damaged by its relatively brief existence, for three reasons. First, the reasons for its shutdown are not closely tied to the aggregative practices and narrative structures I examined in this study. Circa shut down, most simply, because it failed to develop revenue models sufficient to entice the investment of venture capitalists. It essentially had no discernible sources of revenue: It ran no advertising and did not charge for access, and should it have attempted to institute either later on, it would have faced significant hurdles in getting users to acquiesce to those changes. A significant part of its failure to attract venture capital, no doubt, was the relatively small size of its user base, the data on which it guarded closely. But I believe its difficulty attracting users stemmed far more from the dry, lifeless tone of its content coupled with the generalist approach to the subjects it covered than anything in particular about its atomized narrative structure. Circa, then, may not be a useful example of how to build a mobile news business (except potentially as a negative one), but that has little bearing on its value as a case in the evolution of narrative structures and newswork.

Second, as I noted at the end of Chapter 7, one of the main conceptual contributions of Circa's case to the study — the shift of aggregators' narrative orientation from the micro toward the meso level — was also evidenced by numerous other organizations, including the other two that served as sites for observation, SportsPop and VidNews. Circa made this shift in a distinct way, through the commitment to a systematically organized set of stories built out of granular "atomic units," but the general

prevalence and strength of this observation is built not on Circa alone, but on its manifestation throughout the aggregators I spoke to and observed. And third, other organizations are already beginning to organize news around the concept of structured data, just as Circa has. Timeline, a historically oriented news app included in this study, and Structured Stories, an effort to create a cumulative database of news events and stories encoded as data, are both organizations launched within the past year that build on the same ideas of atomizing, structuring, and broadening news that animated Circa. Circa may prove to be a short-lived but influential bellwether in the development of structured forms of news, and this dissertation attempts to capture and evaluate its role in that development.

CONCLUSION: AGGREGATION AND DEMOCRACY

I have argued in this dissertation that aggregation is a form of newswork defined in large part by its relationship to reporting; it validates information by seeking evidence of reporting's methods of gathering evidence, adopts reporting's realist approach to assembling that evidence into authoritative accounts of social reality, and venerates and emulates reporting's professional status at the expense of its own. It thus overlaps significantly with reporting's epistemological justification and practices, but consciously diverges through its adoption of a broader arc-level conception of narrative in an attempt to differentiate itself amid a flurry of similar news accounts. It also diverges from reporting less consciously in its inherent dependence on the work of others and aggregators' resulting uncertainty about the way they ascertain the veracity of their information.

As its most basic level, my inquiry into aggregation began with the question, "Is there something new about aggregation, and if so, what?" The answer to that question is not as clear-cut as I had initially hoped, but it is illuminating nonetheless. Aggregation is more like its journalistic predecessors than it is different; as scholars, media critics, and aggregators themselves like to remind us, the antecedents for today's aggregation

practices run deep through American journalism history (Benton, 2010; Cordell, 2015; Klein, 2015). Likewise, both in practice and in epistemological underpinnings, it bears a strong resemblance to professional reporting. Still, aggregation cannot be dismissed as an object of study with "There is nothing new under the sun" hand-waving; it develops journalism practice in several novel directions. Aggregation's shift toward meso-level narrative emplotment takes journalism into broader and more metajournalistic narrative territory than it has consciously sought out before. Its combination of a realist epistemological perspective with the production of a pastiche of loosely connected and highly contingent digital objects of evidence yields a degree of uncertainty that is new to professional journalism. And its articulation of core professional and ethical values such as adding value or avoiding clickbait represent principles that are distinct to a form of newswork that is dependent on the published work of others but retains a deep sense of professional identity and obligation.

Beyond journalism itself, aggregation's contributions to democracy carry a similar dynamic. By and large, its assets and shortcomings resemble those of American journalism more broadly, though it may present some potential benefits and dangers that are more distinctly its own. Much of aggregation carries the same view of an inert, consumptive public that journalism has had throughout its modern era, and just like many journalists, the aggregators I spoke with were reluctant to see their audiences as desiring or capable of participating more deeply than simply consuming and sharing news. Nothing about this construction of a passive public is inherent in aggregation work; instead, it is simply a result of aggregators' absorption of this vision of the public that is deeply embedded in the norms of American professional journalism. As presently constituted, then, most aggregation offers no new pathways to democratic participation in the production of public knowledge. There are some notable exceptions here: The type of socially based aggregation oriented around finding and amplifying citizens' voices on social media platforms such as Twitter — similar to the type championed by former NPR

social media editor Andy Carvin (Guerrini, 2013) — has the potential of highlighting marginalized voices in discussion of political issues. Similarly, networked aggregation sites such as Reddit allow publics to develop their own news and information agendas and shape discussion around them, though they have tended to mimic the news judgment of major news organizations and exercise groupthink to marginalize dissenting voices (Leavitt & Clark, 2014; Muchnik, Aral, & Taylor, 2013). Thus, as Siapera (2012) argues, aggregation does indeed seem to deepen modern journalism's conception of a passively consumptive, individualistic, depoliticized and fragmented public.

However, with its dual emphases on reaching broad audiences and, in the words of one VidNews aggregator, "explain[ing] or packag[ing] ideas in a new way that engages viewers or readers in a better way than they had been before," aggregation does have the potential of offering more entry points into important news on democratically valuable issues. Aggregation's means of simplifying the complex and creatively presenting it in engaging ways could broaden the reach of democratically useful news and analysis and bring more people into the public discussion on pertinent issues. We must be careful not to overstate this benefit, for two reasons. First, aggregation's condensed presentation of the news can veer from simplified to simplistic if not handled carefully, damaging the sort of nuanced knowledge needed to fuel rich public discussion and informed decision-making. Second, much of today's aggregation concerns topics like sports, celebrities, and animals, that simply aren't very democratically enriching, in large part because they are so commercially driven and rely heavily on attracting the broadest audience possible. But the best aggregation can develop engaging ways to present news on crucial public issues, using its abbreviated simplicity to make them accessible to a broader range of citizens and pointing to and supplementing the fuller treatments on these topics through their links to original sources.

Like any new journalistic form, aggregation is neither panacea nor plague for a news industry that is struggling to adapt financially and professionally to a digital and

mobile news environment. But it is also not merely a passing trend. Instead, aggregation is a form of newsgathering that will, in one form or another, form a significant part of journalistic work in the coming years and that must be acknowledged as a legitimate part of its professional functions. If we can begin to treat aggregation as a fundamental form of newswork — narratively complex and epistemologically contingent on the work of others — we can help it grow into a vital practice for the journalistic profession and for its larger democratic aims, providing clear-eyed, creative, and useful information for engaged news publics.

Appendices

APPENDIX A: LIST OF INTERVIEWS

Table 1: List of Interviews

Name	Title[1]	Organization	Aggregation Type	Legacy/ Digital[2]	Interview Type
Anthony De Rosa	Editor in Chief	Circa	App	Digital	In-person
Daniel Bentley	Senior Editor	Circa	App	Digital	Phone
Evan Buxbaum	Deputy Editor	Circa	App	Digital	Phone
Nicholas Deleon	Technology Editor	Circa	App	Digital	Phone
Adrian Arizmendi	Contributing Editor	Circa	App	Digital	Phone
Ted Trautman	Contributing Editor	Circa	App	Digital	Phone
	Co-founder	SportsPop	Social News Site	Legacy	Phone
	Department Managing Editor	SportsPop	Social News Site	Legacy	In-person
	Managing Editor	SportsPop	Social News Site	Legacy	In-person
	Assistant Managing Editor	SportsPop	Social News Site	Legacy	In-person
	Enterprise Writer	SportsPop	Social News Site	Legacy	In-person
	Writer	SportsPop	Social News Site	Legacy	In-person
	Writer	SportsPop	Social News Site	Legacy	Phone
	Writer	SportsPop	Social News Site	Legacy	Phone
	Senior Director	VidNews	Video-based	Digital	In-person
	News Director	VidNews	Video-based	Digital	In-person/phone
	Content Director	VidNews	Video-based	Digital	In-person/phone
	Social/Mobile Director	VidNews	Video-based	Digital	In-person
	Sports Director	VidNews	Video-based	Digital	In-person/phone
	Copy Editor	VidNews	Video-based	Digital	In-person
	Lead Producer	VidNews	Video-based	Digital	In-person
	Editor/Producer	VidNews	Video-based	Digital	In-person
	Producer	VidNews	Video-based	Digital	In-person
	Producer	VidNews	Video-based	Digital	In-person
	Producer	VidNews	Video-based	Digital	In-person/phone

	Producer	VidNews	Video-based	Digital	In-person/phone
Stacy Cowley	Staff Editor	The New York Times/NYT Now	App	Legacy	In-person/phone
Daniel Victor	Staff Editor	The New York Times/Watching	Breaking News	Legacy	In-person/phone
David Cohn	Executive Producer	Al Jazeera/AJ+[3]	Video-based	Legacy[4]	Phone
Gideon Lichfield	Senior Editor	Quartz/Daily Brief	Email Newsletter	Digital	Phone
Jim Dalrymple II	Breaking News Reporter	BuzzFeed	Breaking News	Digital	Phone
Craig Calcaterra	Blogger-in-Chief	NBC Sports/Hardball Talk	Sports, Breaking News	Legacy[4]	Phone
Jonathan Kalan	Editor-in-Chief	Timeline	App	Digital	Phone
Chris Krewson	Editor	Billy Penn	Local, Social	Digital	Phone
	Digital Editor	National news org (Org 1)	Breaking News	Legacy	Phone
	Breaking News Reporter	National news org (Org 1)	Breaking News	Legacy	Phone
	Breaking News Reporter	National news org (Org 2)	Breaking News	Legacy	Phone
	Editor	Aggregation site	Offbeat News	Digital	Phone
	News Editor	Social news site	Social News Site	Digital	Phone
	Editor	Major digital news org	App	Digital	Phone
	Lead Curator	Automated/manual aggregation app	App	Digital	Phone
	Lead Designer	Automated aggregation app	App	Digital	Phone
	News Editor	Major news org	Sports, Breaking News	Legacy	Phone
	Breaking News Writer	Major news org	Sports, Breaking News	Legacy	Phone

1 Titles are approximated in some cases of anonymous participants so as not to divulge their identities.
2 Legacy news organizations are defined as those traditionally centered on a non-digital news product, even if the aggregation unit is within a digital unit
3 Cohn was also the founding chief content officer of Circa.
4 Operates as a relatively independent digital unit within a legacy news organization.

APPENDIX B: INTERVIEW SCRIPT

Thank you for agreeing to participate in this study. I'll be asking you some questions about how you do aggregation and curation work at [name of organization].

How much time do you have available for this interview? *[Answer]* Good. We can have the interview completed in that amount of time.

This interview will be recorded. If you would like a particular comment to be made off the record, just let me know and I can honor that. Is it OK to go ahead?

The following are the general questions that made up the interviews. Follow-up questions were asked over the course of the interview, but these questions make up the general structure.

News selection/judgment

What makes a story? How do you find pieces of news? What are you looking for? Where does that sense of what you're looking for come from? What does an ideal piece of news look like? What would be an example of a close-but-not-quite story?

Source credibility and verification

What sources do you prefer to go to? Why? What sources do you consider credible? Why? What are the best sources or types of information to use? What are the worst? In what situations do you question a source or a story's accuracy? Why? Do you do anything to verify the information from other sources? In what situations? What role does speed play in your verification process? Do you feel any pressure to work quickly?

Values/ethics

What are the most important ethical aspects of your work? Should you always link to sources, or are there situations in which it's not as important? Where should the link go? How much is appropriate to quote? To paraphrase? How did you determine/learn these norms? How widely are these norms put into practice at your site? Elsewhere? What's the difference between an ethical and unethical aggregator? What are the most important skills for your kind of work? What makes someone good at what you do? Can you point to an example of your best work?

Narrative/form

What are your goals/rules for writing your stories/articles/updates? How were those determined? How often do you follow them? Do you see yourself as a storyteller?

Audience perception

What picture do you have of the audience you're writing for? Where does that picture come from? How does that picture influence the work you produce? What role do audience metrics play in what stories you cover? In how you write/structure stories?

Journalistic identity

Do you consider yourself a journalist? Why/why not? How is what you do similar to traditional journalism? How is it different? How do you think you're perceived by the journalism world in general? How do you think you should be perceived? What do you most wish people understood about what you do? Do you see yourself as an aggregator? Curator? What's the difference?

Organization

Was there any formal training when you started? Any informal training? What's the working relationship with your editor like? How free are you to determine what to cover? Have you done any work recently that you're particularly proud of? Why? What's the most satisfying part of your work? What's the most frustrating part of your work?

Background

How long have you been in journalism? What kind of journalistic work did you do before this job? Did you go to journalism school? Where did you learn how to do this kind of work? What did you learn prior to this job that has been most helpful to you?

APPENDIX C: IRB-APPROVED CONSENT FORMS

Study Number: 2014-11-0042
Approval Date: 01/06/2015
Expiration: 01/05/2016
Funding Source: N/A

Consent for participation in research

Getting their stories short: News aggregation and the production of journalistic knowledge

Conducted by Mark Coddington, University of Texas at Austin School of Journalism
Telephone: (308) 390-3521
Email: markcoddington@gmail.com

The purpose of this form is to provide you information that may affect your decision as to whether or not to participate in this research study. The person performing the research will answer any of your questions. Read the information below and ask any questions you might have before deciding whether or not to take part. If you decide to be involved in this study, this form will be used to record your consent.

The purpose of this study is to examine the norms and practices of aggregation and curation in journalism. It seeks to determine how aggregators and curators select news stories, how they evaluate and verify information, and how they present that information to audiences.

What will you be asked to do?

- Be observed doing aggregation and curation in the normal course of your work.
- Talk in an interview about how you engage in aggregation and curation, including such questions as, "What are you looking for in pieces of news to write about?" "What are the best and worst sources of information to use?" and "What are the most important ethical aspects of your work?"
- Your total estimated time to participate in the interview is about 30 to 45 minutes, depending on the length of your responses and the amount of time you have available. The length of observation at your news organization will be about 40 hours, though this time will not all be spent observing you individually.

What are the risks of being involved in this study?

- There are no anticipated risks of being involved in this study.

What are the possible benefits of this study?

- Helping enable greater understanding of how aggregators and curators do their work, and allowing for better education and training in aggregation and curation in the future

Will there be any compensation or cost?

- You will not receive any type of payment participating in this study.

Do you have to participate?

No, your participation is voluntary. You may decide not to participate at all or, if you start the study, you may withdraw at any time. Withdrawal or refusing to participate will not affect your relationship with The University of Texas at Austin or your employer.

If you would like to participate, simply sign the form and return it to the investigator who gave it to you. You will receive a copy of this form.

How will your privacy and confidentiality be protected if you participate in this research study?

- This study's interview and observation will be kept anonymous unless you provide permission to disclose your identity in future publication; the information will not be attached to your name or any other identifying information unless you explicitly give permission otherwise by marking the option on the following page.
- If you choose to participate in this study, the interview will be audio recorded. The recording will be kept in a password-protected file on the investigator's computer, and the tape will only be heard for research purposes by the investigator. The transcripts and recordings will be destroyed after the study is completed.
- If you would like any part of the interview to remain off the record, feel free to ask the interviewer to stop recording, and he will do so.
- If you prefer anonymity, your contact information will be destroyed after the observation and/or interview is complete. The recording will be transcribed so that no such personal information is visible. If you provide permission to disclose your identity in future publication, your contact information will be destroyed after the publication of the research project is completed.
- In addition, the researcher will seek to avoid publishing descriptive information in your answers that may lead to your identification. However, despite this study's confidentiality measures, the possibility exists that an employer could potentially identify you based on the information given in your answers.
- If it becomes necessary for the Institutional Review Board to review the study records, information that can be linked to you will be protected to the extent permitted by law. Your research records will not be released without your consent unless required by law or a court order.

Whom to contact with questions about the study?

Prior, during or after your participation you can contact the researcher, Mark Coddington, at (308) 390-3521 or send an email to markcoddington@gmail.com for any questions or if you feel that you have been harmed. You may also contact the faculty sponsor for this study, Stephen Reese, a professor at the University of Texas at Austin School of Journalism, at (512) 471-1666 or via email at steve.reese@mail.utexas.edu. This study has been reviewed and approved by The University Institutional Review Board and the study number is 2014-11-0042.

Whom to contact with questions concerning your rights as a research participant?

For questions about your rights or any dissatisfaction with any part of this study, you can contact, anonymously if you wish, the Institutional Review Board by phone at (512) 471-8871 or email at orsc@uts.cc.utexas.edu.

Signature

You have been informed about this study's purpose, procedures, possible benefits and risks, and you have received a copy of this form. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask other questions at any time. You voluntarily agree to participate in this study and to be audio recorded. By signing this form, you are not waiving any of your legal rights.

_____ I agree to allow my name to be used in future publications.
_____ I do not want my name to be used in future publications.

_____
Printed Name

_____ _____
Signature Date

As a representative of this study, I have explained the purpose, procedures, benefits, and the risks involved in this research study.

_____
Print Name of Person obtaining consent

_____ _____
Signature of Person obtaining consent Date

Study Number: 2014-11-0042
Approval Date: 01/06/2015
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Consent for participation in research

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The purpose of this study is to examine the norms and practices of aggregation and curation in journalism. It seeks to determine how aggregators and curators select news stories, how they evaluate and verify information, and how they present that information to audiences.

What will you be asked to do?

- Talk in a phone interview about how you engage in aggregation and curation, including such questions as, "What are you looking for in pieces of news to write about?" "What are the best and worst sources of information to use?" and "What are the most important ethical aspects of your work?"
- Your total estimated time to participate in the interview is about 30 to 45 minutes, depending on the length of your responses and the amount of time you have available.

What are the risks of being involved in this study?

- There are no anticipated risks of being involved in this study.

What are the possible benefits of this study?

- Helping enable greater understanding of how aggregators and curators do their work, and allowing for better education and training in aggregation and curation in the future

Will there be any compensation or cost?

- You will not receive any type of payment participating in this study.

Do you have to participate?

No, your participation is voluntary. You may decide not to participate at all or, if you start the study, you may withdraw at any time. Withdrawal or refusing to participate will not affect your relationship with The University of Texas at Austin or your employer.

If you agree to participate, email the researcher to arrange an interview time and give him your verbal consent to continue at the outset of the interview.

How will your privacy and confidentiality be protected if you participate in this research study?

- This interview will be kept anonymous; the information will not be attached to your name or any other identifying information unless you explicitly give the researcher permission otherwise.
- If you choose to participate in this study, the interview will be audio recorded. The recording will be kept in a password-protected file on the investigator's computer, and the recording will only be heard for research purposes by the investigator. The transcripts and recordings will be destroyed after the study is completed.
- If you would like any part of the interview to remain off the record, feel free to ask the interviewer to stop recording, and he will do so.
- Any other identifying information, such as your phone number or email address, will be destroyed after the interview is complete. The recording will be transcribed so that no such personal information is visible.
- In addition, the researcher will seek to avoid publishing descriptive information in your answers that may lead to your identification. However, despite this study's confidentiality measures, the possibility exists that an employer could potentially identify you based on the information given in your answers.
- If it becomes necessary for the Institutional Review Board to review the study records, information that can be linked to you will be protected to the extent permitted by law. Your research records will not be released without your consent unless required by law or a court order.

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If you agree to participate, email the researcher to arrange an interview time and give him your verbal consent to continue at the outset of the interview.

Thank you.

Please print a copy of this document for your records.

Glossary

AJ+ – An all-digital news network run by Al Jazeera that produces videos and other multimedia news content primarily for a mobile app and social media platforms such as YouTube, Facebook, and Instagram. AJ+ was launched in 2014.

Billy Penn – A small local digital news organization covering Philadelphia, founded in 2014. Billy Penn is aimed at millennial and mobile audiences and is built around a feed of local news on its homepage, much of it links to stories at other news organizations and social media posts, as well as reported stories by Billy Penn journalists.

Brain Pickings – A blog run by Maria Popova that specializes in aggregating, annotating, and contextualizing texts and images on a variety of cultural and literary topics. Brain Pickings was founded in 2006 as a weekly email and became a website shortly afterward.

BuzzFeed – An online media company known for producing content that is widely shared on social media and is heavy on entertainment and web culture. BuzzFeed was founded in 2006 and in 2012 launched a news division that covers national, international, and political news, among other subjects.

Circa – A mobile news app that allowed users to "follow" ongoing stories for which they received only brief updates of new information whenever it occurred. Circa was founded in 2012 and shut down in June 2015.

Contextly – A company, founded in 2012, that provides websites with content recommendation systems to websites, which show users links to related content from that site when viewing a webpage.

CrowdTangle – A social media analytics company that tracks the performance of content shared on social network sites such as Facebook and allows subscribers to see what stories are performing well there.

Dataminr – A social media analytics company that focuses on real-time news, using algorithms to track public data (on Twitter in particular) to quickly determine breaking news and information.

Demand Media – An online media company that assigns content to authors (often freelance and low-paid) based on algorithmically measured user demands such as search or social media trends. Often pejoratively referred to as a "content mill" or "content farm." Founded in 2006 and went public in 2011, after which it lost much of its value.

Flipboard – A mobile news aggregator that allows users to "flip" through content from a variety of sources in a magazine-style presentation. Flipboard was founded in 2010, and its content is primarily selected via algorithm, though it also has manually edited "magazines" by both staff and users.

Gawker Media – A network of blogs on a variety of topics including technology, sports, and media. Gawker blogs consist of a mixture of aggregated news, opinion, and occasional reported news. It was founded in 2002, and its flagship blog, Gawker, covers media and culture.

Google News – An automated news aggregator that displays headlines and summaries from news sources based on user searches. Google News was launched in 2002.

Hardball Talk – A baseball blog at NBC Sports' website that features aggregated news and opinion. Hardball Talk was launched in 2009 as part of a network of blogs headlined by the long-running National Football League blog Pro Football Talk.

The Huffington Post – A news aggregation site founded in 2005 and run by Arianna Huffington. The Huffington Post includes aggregated news and opinion columns, as well as reported news. It is owned by AOL, which bought it in 2011.

Mic – A social news site that produces content meant to be shared widely on social media. Mic, formerly known as PolicyMic, was founded in 2011 and is aimed at millennials. It focuses on news and political issues as well as celebrities and relationships.

New York Times/NYT Now – A mobile news app, updated manually throughout the day, that combines both *Times* content as well as content aggregated from elsewhere online. NYT Now was launched in 2014 and was made free in 2015.

New York Times/Watching – A feature on the *Times* homepage that consists of an continually updated feed of brief headlines and summaries of breaking and developing news stories from around the Internet. Watching was founded in 2014 and is manually updated throughout each day.

Newser – A news aggregation site founded in 2007 by Michael Wolff that displays news stories in an image-based grid format. Newser has undergone several iterations, but it currently centers on a mix between top breaking news stories and odd news.

NewsWhip – A social media analytics company that tracks the performance of content shared across social network sites with a focus on identifying widely shared stories that are — or are about to be — going "viral."

Nieman Journalism Lab – A website devoted to analysis of trends and innovation in journalism and digital media. The Lab was founded in 2008 and is part of the Nieman Foundation at Harvard University. I wrote a weekly aggregated column of news on the news industry from 2010 to 2014.

Nuzzel – An automated mobile app that aggregates and displays the links shared among a user's social network on Twitter and Facebook. Nuzzel is a startup founded in 2015.

PolitiFact – A fact-checking website that rates and tracks the truthfulness of statements by American political figures. PolitiFact was launched in 2007 by the *St. Petersburg*

Times (now the *Tampa Bay Times*) and has since been franchised to numerous other local news organizations.

Quartz – A globally oriented business news site founded in 2012 by Atlantic Media, publisher of the *The Atlantic*. Quartz was noted at its founding for having a scrolling stream of news instead of a homepage (it has since added a homepage) and for being oriented toward mobile users. It has an aggregated daily email newsletter called Quartz Daily Brief.

Reddit – A social aggregator and discussion network in which users post and discuss links on a wide range of topical user-generated forums. Reddit was founded in 2005 and is owned by Condé Nast.

Reported.ly – A news organization that focuses on aggregating social media content related to major global news events. Reported.ly was founded in 2014 by former NPR social media editor Andy Carvin and is part of First Look Media.

Slack – A group messaging app built for work-related teams. Slack allows different "channels" for various simultaneous group conversations and integrates with numerous other programs, allowing group members to automatically notify each other when they update documents or publish stories.

SportsPop – A pseudonym for a website that publishes news on sports and pop culture, focusing on producing content that will be widely shared on social media. SportsPop is owned by a major legacy news organization.

Structured Stories – A database that allows journalists to enter news events as structured data, then piece that together into news narrative forms, or "structured stories." It was launched as a startup in 2014.

Sulia – A social content aggregator that allowed users to follow topics of user-aggregated news. Sulia was founded in 2010 and shut down in 2014.

Techmeme – A site that aggregates technology news and displays it in linked headlines and brief summaries. Techmeme was founded in 2004, and its content is produced by a combination of algorithmic methods and human editors.

Timeline – A mobile app that produces stories about historical events and backstories behind current events. Timeline was a startup launched in January 2015.

TMZ – A celebrity news and gossip site, known for trafficking in sensational, tabloid-style content as well as for breaking major celebrity news stories, such as the death of Michael Jackson in 2009. TMZ was founded in 2005 and is a joint venture of AOL and Warner Brothers' Telepictures.

Trello – A task management software program that allows group members to coordinate workflow on complex projects together. Circa's "main branch" system of organizing stories was run through Trello.

Trove – A social news aggregator built largely on users aggregating their own feeds on various topics, to which other users can subscribe. Trove was founded by *The Washington Post* in 2011 and was spun off to Graham Holdings Co. in 2013.

Tumblr – A microblogging platform, launched in 2007 and now owned by Yahoo, that is designed for users to post images or short text posts. Tumblr also functions as a social network, as users follow and interact with each other's blogs.

TweetDeck – A social media dashboard that allows users to manage Twitter accounts, with customizable columns that enable users to track numerous automatically updating lists of Twitter users at once. TweetDeck is owned by Twitter.

Upworthy – A social news site founded in 2012 and known primarily for producing "viral" content meant to be widely shared on social media, partly through a distinctive style of headlines that only hints at or teases the content of the article.

VidNews – A pseudonym for a news organization that produces short news videos using short video clips and images aggregated from other sources, as well as original graphics and narration. VidNews was founded as a startup but is now owned by a major media company.

Vox – A news site that centers on explanatory journalism, through both aggregated news and opinion journalism. Vox was founded in 2014 by former *Washington Post* blogger Ezra Klein as the flagship publication of Vox Media.

Yahoo News Digest – A mobile news app that provides a twice-daily digest of news stories, aggregated and summarized from Yahoo and other news sources. Yahoo News Digest was launched in 2014 and is manually edited, though its summaries are built on the automated summarizing program Summly, which Yahoo purchased in 2013.

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